Town of Superior
Board of Trustees and
July 8, 2024 (6:00 p.m.)

*REVISED

The Board meeting will be held in-person and remotely, and members of the public wishing to attend may view the Meeting by visiting the Town's website: https://www.superiorcolorado.gov/home

The Board Meeting recording will be posted subsequently on the Town's website.

1. Town Board & Superior Historical Commission (SHC) Joint Dinner (6:00 p.m.)

2. Call to Order Meeting of Board of Trustees (7:10 p.m.)

3. Preliminary Matters (7:10 p.m.)

    a. Pledge of Allegiance

    b. Roll Call

    c. Approval of Agenda

    d. Board Reports (7:15 p.m.)

    e. Public comment on Consent Agenda, Presentations, and Non-Agenda Items. Persons making public comment are asked to state your name and the city you live in (limit 5 min./person) (7:30 p.m.)

    f. Advisory Committee Interviews (7:45 p.m.)

    g. Municipal Judge Presentation (8:05 p.m.)

4. Consent Agenda (8:20 p.m.)
    a. Approval of the Board of Trustees Meeting Minutes
    b. Acceptance of Committee Meeting Notes
    c. Proclamations for Outgoing Advisory Committee Members

d. Consideration of Resolution Approving Advisory Committee Appointments
e. Consideration of Resolution Approving Advisory Committee Reappointments
f. Consideration of Resolution Reappointing Municipal Judges
g. Approval of Town Board Goals
h. Airport Noise Report for June

5. Consideration of Resolution Adopting Housing Plan (8:30 p.m.)

6. Consideration of Resolution Approving Final Development Plan (FDP) for Everhome Suites Hotel in Downtown Superior (9:15)

7. *Executive Session to hold a conference with the Town's attorney to receive legal advice on specific legal questions, pursuant to C.R.S. § 24-6-402(4)(b), regarding legal issues in Original Town and related contract matters

8. Adjournment (11:00 p.m.)

Public comment related to a Public Hearing item may be submitted by email as an alternative to speaking in person, and emailed comments must be received at townboard@superiorcolorado.gov by 12:00 noon on the calendar day before the Public Hearing (Sunday if the Public Hearing is on Monday).

Public comment submitted via e-mail regarding general Town Board agenda items that are not the subject of public hearings should be submitted with sufficient time before the meeting to allow Board Members an opportunity to review.

ITEM NO. 1

INFORMATION FOR MEETING
OF THE SUPERIOR BOARD OF TRUSTEES

AGENDA ITEM NAME: **Retention of Grasso Park Bungalow**

MEETING DATE: **March 11, 2024**

PRESENTED BY: **Leslie Clark, PROS Director**
Jennifer Garner, Arts & Historical Programs Supervisor
Larry Dorsey, Historical Chair
Christina Cain, Anthropology Collections Manager and NAGPRA Coordinator University of Colorado Museum of Natural History

PRESENTED FOR: **Presentation and Discussion**

BACKGROUND:
The Superior Historical Commission (SHC) proposes to retain the Grasso Park bungalow as a secondary museum space for additional programming to include Marshall Fire exhibits paired with agricultural history, while restoring the Asti Park Mine Camp house to be a museum of mining history. Upon the completion of the Mine Camp house rebuild, the SHC envisions an opportunity for revitalization and growth of programmatic offerings. The use of the Grasso Park bungalow as an interim museum space has become sentimentally apparent to maintain as a historic site, especially because it symbolically survived the Marshall Fire. The ability to program two museum facilities would help signify the rebirth and forward-looking maturity of Superior's dedication to preserving history. The SHC envisions designing the two museums to host more frequent and in-depth tours, offer focused workshops and small group seminars, regularly rotate exhibits, and host more K-12 field trips. A secondary museum space would also enable the SHC to have a devoted and permanent Marshall Fire exhibit area to include artifacts, photos, and video monitors. The outpouring of public support in the past year towards sustaining the Town's historical programs has affirmed how important Superior's history is to its residents.

Facility and programmatic growth would warrant the need for a dedicated museum staff person by 2025, or earlier. Such dedicated staff would assist with collection management, all open (and extended) hours, museum programming (tours, workshops, speaker events, etc.), rotation of exhibits, and the training of volunteer docents. Without staff support, the SHC's vision for space and programmatic growth would not be possible from volunteers alone. Such growth and dedicated staffing would align the Town to be more equivalent to our neighboring historical museums.

BUDGET IMPLICATIONS:

1. Current monthly expenses at the Grasso Park bungalow equate to roughly $800 per month (mats, janitorial, gas/electric, HVAC maintenance). Other expenses could arise in the future such as security system, separate phone/internet, pest control, window cleaning.

2. Future staffing expenses range, depending on the position and hours.
    - Guest Service Associate (GSA): $17.11 – 24.76/hour
    - Full time Museum Coordinator: $50,835 – 82,184/year
    - Full time Museum Specialist: $62,234 – 88,275/year

RECOMMEDED ACTION:

- Approve the recommendation by the SHC for retention of the Grasso Park bungalow upon completion of the Asti Park Mine Camp House rebuild.

ATTACHEMENTS

- Superior Historical Commission Proposal for Grasso Bungalow

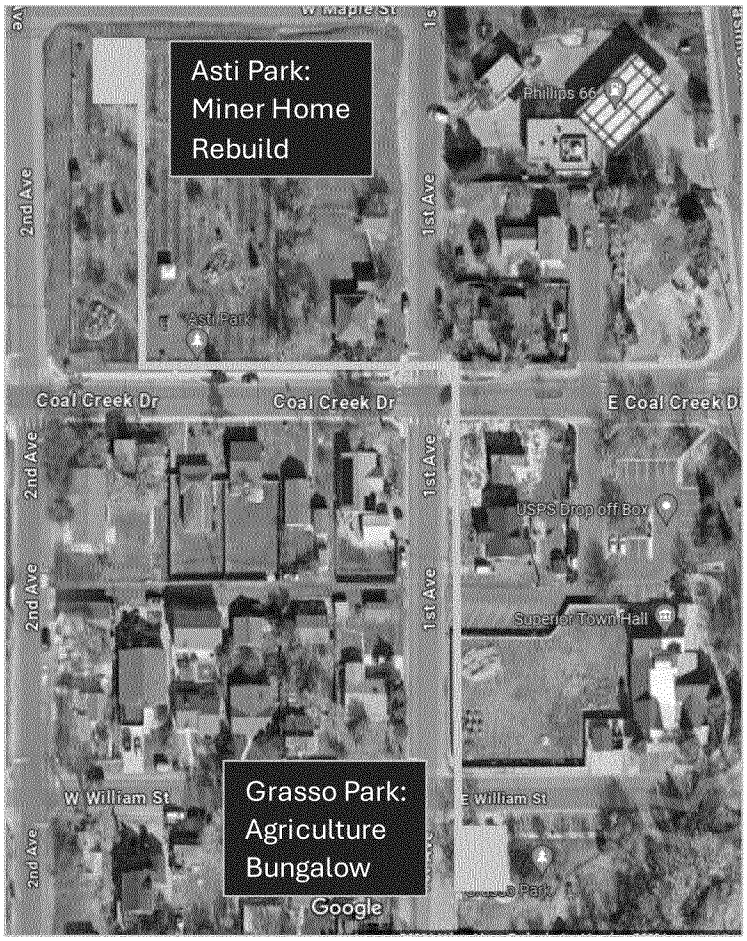
Three Turns.

Two Museums.

One Superior History.

The Superior Historical Commission (SHC) is proud to present a plan to connect Superior with its past and present with the launch of two historical museums at Asti Park and Grasso Park.

With just three turns on the road, Superior residents will be able to experience an original, historical building from 1904, a rebuild of a former miner's home, and a clear link to what Superior was and to what Superior can be.



The mission of these two museums will be to allow residents increased opportunities to learn about the rich history of Superior through interconnected access to old builds and new, the everyday life of a Superior miner and farmer, experience rotating exhibits featuring art, rare artifacts from a millennia or more into our past, and preserve the history of Superior's most historic event—the Marshall Fire.

Here is what is envisioned in the next year with having two historical museums:

- Expanded hours of operation for both locations
- Greater number of options for rotating exhibitions with loaned items
- Better alignment with neighboring historical museums and commissions
- Continued access to the historical Marshall Fire interactive displays
- Establish a new Arts & Historical Programs Coordinator support position

We believe having the museums at Asti Park and Grasso Park will be essential to SHC operations in the months and years ahead. This plan will start immediately and build incrementally to identify demand for such historical expansion, but we are confident in our volunteer and staff abilities to curate showcases, events, walks, and additional activities.

ITEM NO. 3f

INFORMATION FOR MEETING
OF THE SUPERIOR BOARD OF TRUSTEES

AGENDA ITEM NAME: **Advisory Committee Applicant Interviews: Advisory Committee for Environmental Sustainability (ACES), Open Space Advisory Committee (OSAC), Parks and Recreation Advisory Committee (PARC)**

MEETING DATE: **July 8, 2024**

PRESENTED BY: **Matt Magley, Town Manager**

PRESENTED FOR: **Interviews**

BACKGROUND:
Staff has scheduled interviews with the Town Board for candidates interested in consideration for appointment to serve on a Town Advisory Committee. All Advisory Committee vacancies are advertised through Town media. Copies of possible interview questions and application materials have been included for review.

Listed below are the applicants scheduled to interview with the Town Board:

Advisory Committee for Environmental Sustainability (ACES) – 1 Vacancy
- Sanjay Rajan

Open Space Advisory Commission (OSAC) – 1 Vacancy
- Ryan Dionne
- Todd Gleeson

Parks and Recreation Advisory Committee (PARC) – 1 Vacancy
- Justin Willis

ATTACHMENTS
- Applicant applications
- Sample interview questions *Updated committee-specific

Town of Superior Advisory Groups

Advisory Committee for Environmental Sustainability (ACES)

Board Details

ACES Overview
The Advisory Committee for Environmental Sustainability (ACES) works to support environmental sustainability in the Town of Superior by focusing on water and energy efficiency, waste management, and other activities that support resource conservation, improved air and water quality, and climate change mitigation.

ACES was formerly called the Waste Diversion Advisory Committee and was created by the Board of Trustees at their May 14, 2001 meeting to help meet the goal of minimizing waste generated in Superior through recycling, reuse and pollution prevention. In November of 2005, the committee's name changed to the Recycling and Conservation Advisory Committee, and in December of 2017 the name changed again to the Advisory Committee for Environmental Sustainability with expanded scope beyond waste management.

Overview

Size 9 Seats

Term Length Varies

Term Limit 3 Terms

Additional

Meeting Information

Date: Second Thursday of Each Month Time: 5:30 pm - 7:30 pm Location: Superior Community Center 1500 Coalton Rd Superior, CO 80027 ACES meetings are currently held in person with a concurrent virtual option: https://bit.ly/3mfasES

Contact the Committee Members

ACES

Staff Liaison

Alexis Bullen - Sustainability Manager

Establishing Resolution

Change_RCAC_to_ACES.pdf

Committee Work Plan

2024_ACES_Workplan_Final.pdf

Additional Documents

ACES_2023_Work_Plan__Final.pdf

Town of Superior Advisory Groups

Advisory Committee for Environmental Sustainability (ACES)

Board Roster

Lisa Barnes
Partial Term Feb 12, 2024 - Jun 30, 2026

Mike Foster
2nd Term Aug 10, 2020 - Jun 30, 2025

Office/Role Chair

Michelle Gazarik
1st Term Feb 22, 2021 - Jun 30, 2026

Nicola J Hewett
1st Term Apr 10, 2023 - Jun 30, 2026

Miles H Hoffman
1st Term Feb 22, 2021 - Jun 30, 2025

James A Lester
Partial Term Dec 13, 2021 - Jun 30, 2024

John Schallau
1st Term Jun 30, 2021 - Jun 30, 2024

James Zarske
2nd Term Jul 01, 2023 - Jul 01, 2026

Office/Role Vice Chair

Vacancy

Application Form

Profile

General Instructions:
Superior residents interested in serving on an Advisory Group are asked to complete this application. This form is designed to facilitate the application process for positions on the Town of Superior's various Advisory Groups. Appointments are made by the Superior Board of Trustees after reviewing all applications. Interviews may be necessary. Appointments will be made following the review of interviews at public meeting by the Board of Trustees. APPLICANTS MUST BE RESIDENTS OF THE TOWN OF SUPERIOR (except for the Superior Historical Commission).

Sanjay — First Name
— Middle Initial
Rajan — Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Question applies to multiple boards

Years of Residence in Superior

5+

Question applies to multiple boards

Employer

ClimateResilient.Earth

Question applies to multiple boards

Position Title

Co-founder

Which Boards would you like to apply for?

Advisory Committee for Environmental Sustainability (ACES): Submitted

Experience

Question applies to multiple boards

Please list your past or current experience in civic or private organizations and/or governmental service experience. If you have not attached your resume (below), please list your professional experience and/or current occupation and responsibilities that may be relevant to your application.

I have previous been Art Commissioner for City of Boulder for 2+ years. I have been on the board of Seva.org, a global non-profit focused on preventable blindness around the globe for over 5+ years. I was President of UNA (United Nations Association) Denver for two years. https://linkedin.com/in/sanjayrajan

Question applies to multiple boards

Please provide any additional comments or information that you feel qualifies you to serve on the Advisory Group(s) for which you expressed interest. Please include any additional documents you feel may be relevant.

https://climateresilient.earth https://konbit.one are two entities I have launched to focus on Circularity, RegenerativeAgriculture, Sustainablilty and Climate Resiliency. While my work is global, I am also engaged with the state of Colorado department of public health and environment (CDPHE) as well as with CDA (Colorado Department of Agriculture)

Question applies to multiple boards

Upload Resume

Question applies to multiple boards

Upload relevant document

Town Documents

Question applies to multiple boards

Have you read any of the following Town of Superior documents (all of these can be found on the Town's website)? If yes, check the box next to the document(s) you have read. **Please note that familiarity with these documents is not a requirement for serving on an Advisory Group.

Question applies to multiple boards

Superior Comprehensive Plan

- (•) Yes
- ( ) No

Question applies to multiple boards

Advisory Group Work Plan

- (•) Yes
- ( ) No

Town of Superior Advisory Groups

Open Space Advisory Committee (OSAC)

Board Details

Overview
The purpose of the Open Space Advisory Committee is to investigate options for preserving land for open space purposes in the Town of Superior.

Mission
To acquire, conserve, and provide stewardship of natural open space lands and associated resources, to promote and protect wildlife, to ensure public enjoyment and appropriate recreation, and to conduct relevant educational programs.

Goals
• To advise the Town Board regarding acquisition and protection of natural lands and buffers using the Open Space Fund.
• To advocate for the conservation and restoration of natural resources for the benefit of the environment and for the education and enjoyment of current and future generations.
• To promote the conservation and protection of wildlife, including providing input on development projects and conserving healthy wildlife resources, within the Town of Superior.
• To provide public outreach, education and volunteer opportunities by increasing awareness and appreciation of the Town of Superior's open space.
• To provide quality recreational opportunities, including recommendations regarding trails on open space, while minimizing the impact to open space resources.
• To collaborate with surrounding open space organizations on issues of mutual interest including future open space acquisitions, wildlife conservation and protection, and the connectivity of trails and access within the region.

Overview

Size 9 Seats

Term Length Varies

Term Limit 3 Terms

Additional

Meeting Information

Date: Second Wednesday of Each Month Time: 6:00 pm - 8:00 pm Location: Superior Community Center 1500 Coalton Rd Superior, CO 80027 OSAC meetings are held in person with a concurrent virtual option: http://bit.ly/2XufkJg

Contact the Committee Members

OSAC

Staff Liaison

Phary Om - Open Space Ranger

Establishing Resolution

2012_Resolution_Resstablishing_OSAC.pdf
Establishing_OSAC.pdf

Committee Work Plan

OSAC_2024_Final_Work_Plan.pdf

Additional Documents

Town of Superior Advisory Groups

Open Space Advisory Committee (OSAC)

Board Roster

Tracey F Bain

1st Term Jun 30, 2021 - Jun 30, 2024

Amber Greves

1st Term Feb 08, 2021 - Jun 30, 2024

Joann Y Maneri

1st Term Feb 12, 2024 - Jun 30, 2026

Michael Mcdonnell

1st Term Jun 30, 2021 - Jun 30, 2025

Kara Neuse

1st Term Sep 28, 2020 - Jun 30, 2026

Office/Role Chair

Rita A Trainor

1st Term Aug 08, 2022 - Jun 30, 2026

Office/Role Vice Chair

Cristi M Verbeck

1st Term Jan 23, 2023 - Jun 30, 2026

Jeffrey L Wade

1st Term Jul 10, 2023 - Jun 30, 2026

Vacancy

Application Form

Profile

General Instructions:
Superior residents interested in serving on an Advisory Group are asked to complete this application. This form is designed to facilitate the application process for positions on the Town of Superior's various Advisory Groups. Appointments are made by the Superior Board of Trustees after reviewing all applications. Interviews may be necessary. Appointments will be made following the review of interviews at public meeting by the Board of Trustees. APPLICANTS MUST BE RESIDENTS OF THE TOWN OF SUPERIOR (except for the Superior Historical Commission).

Ryan
First Name

Middle Initial

Dionne
Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Question applies to multiple boards

Years of Residence in Superior

15 years

Question applies to multiple boards

Employer

Outside

Question applies to multiple boards

Position Title

Video Producer

Which Boards would you like to apply for?

Open Space Advisory Committee (OSAC): Submitted

Experience

Question applies to multiple boards

Please list your past or current experience in civic or private organizations and/or governmental service experience. If you have not attached your resume (below), please list your professional experience and/or current occupation and responsibilities that may be relevant to your application.

Question applies to multiple boards

Please provide any additional comments or information that you feel qualifies you to serve on the Advisory Group(s) for which you expressed interest. Please include any additional documents you feel may be relevant.

Question applies to multiple boards

Upload Resume

Question applies to multiple boards

Upload relevant document

Town Documents

Question applies to multiple boards

Have you read any of the following Town of Superior documents (all of these can be found on the Town's website)? If yes, check the box next to the document(s) you have read. **Please note that familiarity with these documents is not a requirement for serving on an Advisory Group.

Question applies to multiple boards

Superior Comprehensive Plan

○ Yes ◉ No

Question applies to Open Space Advisory Committee (OSAC)

Open Space Summary Report

◉ Yes ○ No

Question applies to multiple boards

Advisory Group Work Plan

○ Yes ◉ No

Application Form

Profile

General Instructions:
Superior residents interested in serving on an Advisory Group are asked to complete this application. This form is designed to facilitate the application process for positions on the Town of Superior's various Advisory Groups. Appointments are made by the Superior Board of Trustees after reviewing all applications. Interviews may be necessary. Appointments will be made following the review of interviews at public meeting by the Board of Trustees. APPLICANTS MUST BE RESIDENTS OF THE TOWN OF SUPERIOR (except for the Superior Historical Commission).

Todd (First Name) | T (Middle Initial) | Gleeson (Last Name)

Email Address

Home Address | Suite or Apt

City | State | Postal Code

Primary Phone

Question applies to multiple boards

Years of Residence in Superior

2yr +

Question applies to multiple boards

Employer

Univ Colorado, Boulder

Question applies to multiple boards

Position Title

Professor Emeritus

Which Boards would you like to apply for?

Open Space Advisory Committee (OSAC): Submitted

Experience

Question applies to multiple boards

Please list your past or current experience in civic or private organizations and/or governmental service experience. If you have not attached your resume (below), please list your professional experience and/or current occupation and responsibilities that may be relevant to your application.

I have spent my career in teaching, research, and administrative service at the University of Colorado, Boulder where I served on numerous boards. My community service has involved primarily neighborhood boards and service to one of our community institutions, Elevations Credit Union.

Question applies to multiple boards

Please provide any additional comments or information that you feel qualifies you to serve on the Advisory Group(s) for which you expressed interest. Please include any additional documents you feel may be relevant.

I make nearly daily use of Town of Superior and Boulder County Open Space trails and am quiet familiar with the Town's Open Space inventory and trails. I have training in areas of animal ecology although my expertise tends to the cellular levels. I am an amateur wildflower aficionado and have catalogued much of the local flora in Coyote Ridge and adjacent open spaces. My wife and I lost our Louisville home of 30 years in the Marshall Fire at which time we relocated to Superior. Consequently I also have an interest in wildfire mitigation in our open spaces.

Question applies to multiple boards

Gleeson.Resume.6.2024.pdf

Upload Resume

Question applies to multiple boards

Upload relevant document

Town Documents

Question applies to multiple boards

Have you read any of the following Town of Superior documents (all of these can be found on the Town's website)? If yes, check the box next to the document(s) you have read. **Please note that familiarity with these documents is not a requirement for serving on an Advisory Group.

Question applies to multiple boards

Superior Comprehensive Plan

- (•) Yes
- ( ) No

Question applies to Open Space Advisory Committee (OSAC)

Open Space Summary Report

- (•) Yes
- ( ) No

Question applies to multiple boards

Advisory Group Work Plan

- (•) Yes
- ( ) No

Town of Superior Advisory Groups

Parks and Recreation Advisory Committee (PARC)

Board Details

Overview
The purpose of the Parks and Recreation Advisory Group (PARC) is to consider and provide input to the Town Board on park and recreation programs, services and facilities. PARC is charged with advising the Town Board on the master plan addressing parks and recreation services, goals and objectives for parks, recreation, and trails in the Comprehensive Plan, and work cooperatively with OSAC and other advisory groups on open space and related information.

PARC was formerly called the Parks, Recreation, Open Space and Trails Advisory Committee (PROSTAC) and was created by the Board of Trustees at their regular meeting on August 25, 2003; with the purpose of forming a long-range plan concerning parks, trails, open space, and recreation within the Town. The committee's name was changed to Parks and Recreation Advisory Group (PARC) by the Town Board on March 8, 2021.

Overview

Size 9 Seats

Term Length Varies

Term Limit 3 Terms

Additional

Meeting Information

Date: Third Wednesday of Each Month Time: 7:00 pm - 9:00 pm Location: Superior Community Center 1500 Coalton Rd Superior, CO 80027 PARC meetings are currently held in person with a concurrent virtual option: https://bit.ly/2Po3SOw

Contact the Committee Members

PARC

Staff Liaison

Bryan Meyer - Recreation Manager

Establishing Resolution

Resolution__R-18_-_Change_name_of_PROSTAC_to_PARC-R020421.pdf

Committee Work Plan

PARC_2024_Final_Work_Plan.pdf

Additional Documents

Town of Superior Advisory Groups

Parks and Recreation Advisory Committee (PARC)

Board Roster

Saadia Aurakzai-foster

1st Term Dec 13, 2021 - Jun 30, 2025

Grace Batey

1st Term Oct 23, 2023 - Jun 30, 2025

Brent Hartman

1st Term Apr 10, 2023 - Jun 30, 2026

Lindsay Kerr

1st Term Oct 23, 2023 - Jun 30, 2025

Tim W Martin

1st Term Jun 30, 2021 - Jun 30, 2025

Burton Mckenzie

1st Term N/A - Jun 30, 2026

Martha J Siegmund

1st Term Apr 10, 2023 - Jun 30, 2026

Susan Stanish

2nd Term Jan 23, 2017 - Jun 30, 2024

Office/Role Vice Chair

Robert Stephens

1st Term Mar 28, 2022 - Jun 30, 2026

Office/Role Chair

Application Form

Profile

General Instructions:
Superior residents interested in serving on an Advisory Group are asked to complete this application. This form is designed to facilitate the application process for positions on the Town of Superior's various Advisory Groups. Appointments are made by the Superior Board of Trustees after reviewing all applications. Interviews may be necessary. Appointments will be made following the review of interviews at public meeting by the Board of Trustees. APPLICANTS MUST BE RESIDENTS OF THE TOWN OF SUPERIOR (except for the Superior Historical Commission).

Justin
First Name

Middle Initial

Willis
Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Question applies to multiple boards

Years of Residence in Superior

9

Question applies to multiple boards

Employer

SpearMC Consulting, Inc.

Question applies to multiple boards

Position Title

Managing Director

Which Boards would you like to apply for?

Parks and Recreation Advisory Committee (PARC): Submitted

Experience

Question applies to multiple boards

Please list your past or current experience in civic or private organizations and/or governmental service experience. If you have not attached your resume (below), please list your professional experience and/or current occupation and responsibilities that may be relevant to your application.

Over my lifetime, I have served and volunteered in many capacities but nothing formal. I have attended PARC Committee meetings for the past few months and wish to contribute to the effort of perpetually maintaining and improving our community.

Question applies to multiple boards

Please provide any additional comments or information that you feel qualifies you to serve on the Advisory Group(s) for which you expressed interest. Please include any additional documents you feel may be relevant.

My wife, 7-year-old daughter and I love Superior and take advantage of all that it has to offer. We are engaged in Eldorado School activities and volunteering opportunities. I would like to help keep our community nice for my family as well as for all others residences moving forward.

Question applies to multiple boards

Upload Resume

Question applies to multiple boards

Upload relevant document

Town Documents

Question applies to multiple boards

Have you read any of the following Town of Superior documents (all of these can be found on the Town's website)? If yes, check the box next to the document(s) you have read. **Please note that familiarity with these documents is not a requirement for serving on an Advisory Group.

Question applies to multiple boards

Superior Comprehensive Plan

○ Yes ◉ No

Question applies to Parks and Recreation Advisory Committee (PARC)

Parks, Recreation, Open Space and Trails Master Plan

◉ Yes ○ No

Question applies to multiple boards

Advisory Group Work Plan

○ Yes ◉ No

Advisory Committee Interview Questions

GENERAL/ALL

1) Have you attended a committee meeting?

2) Have you read the committee's current work plan?

3) What are the top 2 items on that work plan of interest to you?

    a) What would you add or remove from the committee's work plan?

4) Are you able to commit to committee activities outside of the monthly meetings (i.e. working groups, events, educational sessions, project research, etc.)?

    a) How much time are you willing to invest with the committee?

5) What expertise do you hope to bring to the advisory committee?

6) Do you have any potential conflicts of interest that could preclude you from being a committee member or participating in certain committee projects, activities, etc.?

Advisory Committee for Environmental Sustainability (ACES)

1) What would be one of [the best/most effective] ways (in your opinion) to improve environmental sustainability in Superior?
2) What do you think of the Town's Sustainability Action Plan?
    a) Are there any elements that particularly resonate?
    b) Are there any elements you think are missing or that need greater focus?
3) Why are you interested in sustainability at a municipal level?
4) What sustainability topics are you most passionate about the Town of Superior pursuing or making progress on?
5) ACES is an engaged advisory committee, with expectations of participation beyond the monthly meeting. What is your capacity to attend one additional monthly working group meeting and to help with representing ACES at tabling, outreach and public events?
6) The advisory committee has three working groups: Resources, Operations and Outreach. Which of these working groups are you most interested in participating in? Why?

7) What are your main interests regarding environmental sustainability (e.g., climate, energy, waste, water, air quality, etc.)?

Cultural Arts and Public Spaces Advisory Committee (CAPS)

1) Do you have any specific ideas for activating public spaces, creating cultural experiences, or adding art installations to the Town of Superior? (or: What's the first thing you would do...?)
2) Is there a particular area in Superior you think could use more art?
3) What is your favorite piece of art or public space in Superior?

Open Space Advisory Committee (OSAC)

1) How did you learn of this Open Space vacancy?
2) What in your words is the mission of the Town of Superior's Open Space Advisory Committee?
3) You've had the opportunity to review OSAC's work plan as well as their recent meeting agendas…is there any particular work that interests you most?
4) Have you reviewed the Superior Comprehensive Plan?
5) Have you reviewed the Open Space Summary Report?
6) What has been your past experience with Superior events, volunteering and programs?
7) What, in your words, is the mission of the Town of Superior's Open Space Advisory Committee?

Park and Recreation Advisory Committee (PARC)

1) Why do you want to participate on PARC?

2) What do you see as the most important considerations for the present and future state of parks and recreation services for the Town?

3) One expectation for any resident serving on any Town of Superior advisory committee is the ability to collaborate effectively, both with fellow committee members as well as with town staff, town board members, and members of other advisory committees. Can you describe your experience and work style with regard to collaboration?

Superior Historical Commission

1) What is your interest in local history?

2) Can you be available for Saturday museum openings, school field trips, evening programs and other similar activities?

3) What is your area of expertise within your career and/or education with regard to historical museums, collections, education, history or historic preservation?

4) What would you hope to contribute to this commission?

5) Do you have a connection with Superior – current, recent or past?

6) Have you participated on any Historic Preservation boards or committees in the past?

MEETING NOTES
Historical Commission
June 21, 2024 10:00 AM
SUPERIOR COMMUNITY CENTER

1. Call Meeting to Order
   At 10:00 a.m. Chairman, Larry Dorsey, called the meeting to order.

2. Preliminary Matters
   a. Roll Call
      Present: Chairman, Larry Dorsey; Mary Cartwright; Maureen Hogg; Scott Phillips; Dalton Valette (remotely); Errol "Wally" Waligorski; Karen Waligorski
      Staff Present: Jennifer "JG" Garner, Arts & Historical Programs Supervisor
      Trustee Present: Bob McCool
      Guests: Jeanne Barrett from the Lion Club, Paul Gibbs

   b. Approval of Agenda
      Scott motioned to approve the agenda and Dalton seconded.
      Unanimously approved.

   c. Public Comment (limit 5 minutes/person)
      There was no public comment.

3. General Updates, Debriefing & Discussion
   a. Updates
      i. Meet at Asti museum last 30 minutes to finalize sink location
      It was planned to meet at the Asti Museum during the last 30 minutes of the meeting to finalize a decision on the potential sink donation; however, we do not yet have the dimensions of the sink. Some members will still go over to the Museum following our meeting to view the completed interior.

      ii. Correspondence, completed/required
      Mary reported that a thank you note was sent to Barbara Ogg for her monetary donation made on May 4, after the historic walk.

      iii. Marshall fire Memorial all advisory group subcommittee, via CAPS
      A meeting planned for earlier this week was canceled. A survey is going out to town residents for their experiences during the fire. There will be one more meeting to finalize plans for the Memorial—what it will be called and exactly what it will look like.

      iv. Fire Truck/Engine maintenance status
      Wally reported that he had talked to Mike at Mountain Truck on Thursday, and the work is completed. We plan to have the truck on site for the Ribbon Cutting Ceremony on June 29th. JG indicated that the expenditure for this maintenance will come out of the Parks & Rec. budget. New LED bulbs have been installed for the lights, brakes and turn signals. They spent time trouble shooting repair of oil leaks, the speedometer, gas gauge, and the siren. These items could not be repaired due to the age of the parts. If any of those parts can be located somewhere in the future, we will look into their repair then.

      v. Mass Media List

Maureen is interested in updates to the videos as part of the media list she is tracking, such as adding the tour of Asti museum during covid, Marshall Fire video and rebuild time lapse videos JG has been working on. We currently have roughly 3-4 copies of the Shootout video, on disk.

vi. Donor(s)

- Lions Club & Marshall Fire: bench donation
  Jeanne Barrett is working on the final wording to appear on the plaque for the bench as well as the one on the video equipment inside the museum. They are also considering the right location for the bench in Asti Park, hopefully in a shady spot. Bob added that they are working on the sound for the video and dealing with the size of the file for the buildout of the Museum.

b. Debriefing

i. June 1st museum open day
During the museum open time there were a few visitors both in the morning and afternoon. Chris Wecker and her mother, Helen Warembourg, came by in the morning. They were very interested in many artifacts in the Grasso Museum. They informed Wally that they would be back in town sometime in the fall. By that time, their barn should be more organized for our group to go view some of their agricultural artifacts they are willing to donate to us. They also brought with them some old Superior school photos. Helen is going to work on trying to identify each child in the pictures. One is from 1939.

ii. Heritage Roundtable
Larry attended the June 20 meeting. All felt that the Square Nail Award Ceremony in May went very well. Mary added that she has purchased the book on the Marshall Fire which received an award that night. The group also made plans for the Boulder Central Park anniversary celebration on June 29.

c. Discussion

i. Boulder History Museum's proposed donation list; kitchen sink measurement & possible moving company (vote)
We need pictures and dimensions of items prior to making a decision on accepting the donations. It was proposed that we spend up to $500 to move any of the large items we accept. Moved by Mary; seconded by Dalton. *Unanimously approved.*

ii. Bungalow status.
The Board of Trustees held a work session recently, and our proposal to make the Grasso Bungalow a second museum with an agricultural theme was on their agenda. A final decision was not made by the Board but several points were brought up during their meeting. To open and operate this as a second museum, the SHC has recommended a staff position to help beginning in 2025. Other points the group discussed include how would we utilize this building until that time? What are our near-term plans for the building? The Town is in need of office space, would they put offices in the bungalow in the interim? What role would the SHC play in operating two museums as volunteers, and what role would paid Town staff play in the operation in a year? What would the hours of operation be? This item is on our agenda for our dinner session with the Board in July. Dalton is putting together a One Pager with key points illustrated for this discussion.

iii. Second grade field trips
Larry asked for volunteers to contact the second-grade teachers to see if there is an interest and also if they have funds in the budget for the buses.

iv. Gladys Forshee Marshall Fire oral histories
Gladys will be interviewing Superior citizens as well as members of the Historical Commission to gather information for a book she is writing.

v. Naming of each Museum
Members discussed various names for the two museums such as Asti Park Historical Museum and Grasso Park Historical Museum.

vi. Fall Program print visuals and cost (vote)
Maureen proposed a large printed map for the presentation that could be used at the museum and/or other events or displays. It was moved by Scott Phillips and seconded by Mary Cartwright that we fund the necessary visuals for the fall program as proposed by Maureen. *Unanimously approved.*

vii. Finalize agenda items for July 8 Board dinner
Members prioritized the bullet items that had been sent to JG to be on the agenda for meeting with the Board.

viii. Labor Day Parade in Louisville.
Members agreed to participate in the Louisville Labor Day parade. Larry is available to drive the fire truck.

d. Upcoming Events

i. Asti Museum Ribbon Cutting event, June 29, 4:00-5:30 p.m.
The Mayor will speak as well as members of the Staff, Board of Trustees, and Historical Commission. There will be free ice cream provided by the Sweet Cow from Louisville. We will have coloring books and fire hats to pass out and the Lost Superior book to sell. The fire truck will be on site.

ii. Next ANFRM meeting.
There was no information available at our meeting, but Katie Karras, the ANFRM Vice President, sent out an email last Friday with information on upcoming meetings.

iii. July 4th booth at Town event
We plan to have the usual items at our booth on July 4th, such as pictures, a few artifacts, coloring books, and the Lost Superior book for sale.

iv. July 6 museum open day
All members are available that day to staff the Museum.

e. Staff Updates

i. Museum ribbon cutting event and landscaping
The ribbon cutting event was covered previously (above). The landscaping is being worked on this week to install the sprinkler system and grass seed. JG has ordered address numbers for both sides of the Museum and is working on the run-of-show agenda.

ii. Arts & History website
JG indicated that the site is now live and invited the group to take a look. She also indicated the webpage will have a link for both CAPS and the Historical Commission for visitors to see other resources that are available, donation opportunities, etc. This is still being worked on, so more to come on the website in the future.

iii. Budget report
The Q2 budget report was included in our meeting handouts.

4. Work Plan Check In
   a. Annual Fall Program, Superior's Geology: Jeff Graves confirmed for Thursday, 10/17 at 7 p.m.
   Maureen said Jeff Graves will be giving a lecture on Colorado's geology relating to the formation of coal. The visual material purchases were covered above.

   b. Follow up with the Arapahoe tribe and the Wind River reservation
   Scott indicated that this is ongoing, but that we do need a strategy for going forward. They are looking for nominations for historic sites.

5. Other
   There were no additional items discussed.

6. Adjourn
   At noon Scott motioned that the meeting be adjourned and Dalton seconded.
   Unanimously approved.

Next Meeting, July 19, 2024 10:00 a.m. at the Superior Community Center

ITEM NO. 4c

INFORMATION FOR MEETING
OF THE SUPERIOR BOARD OF TRUSTEES,

AGENDA ITEM NAME: **Presentation – Proclamations for Outgoing Advisory Committee Members**

MEETING DATE: **July 8, 2024**

PRESENTED BY: **Matt Magley, Town Manager**

PRESENTED FOR: **Presentation**

BACKGROUND:
It has been the Town's practice to recognize Advisory Committee members for their service. A proclamation has been prepared for this Town Board meeting to recognize a committee member who has completed their full term of service:

Parks and Recreation Advisory Committee (PARC)

- Susan Stanish – completed a partial term and two full terms from 2017 to 2024 and served as vice chair from 2022 to 2024.

The Town appreciates their service to the residents of Superior through their dedication and time commitment to serve on an advisory committee. Their service will be missed by the members of the committee, the Mayor and Board of Trustees and by Town Staff. These Proclamations serve to officially recognize them for their service to the Town of Superior and its residents.

RECOMMENDED ACTION:
Presentation of Proclamation

ATTACHMENTS:

- Proclamation

A PROCLAMATION OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR IN APPRECIATION OF THE SERVICE OF
Susan Stanish

WHEREAS, Susan Stanish is a resident of the Town of Superior and has been a strong advocate for the citizens of Superior through volunteering to serve on the Parks and Recreation Advisory Committee and is to be commended for her effort to help make our community a better place; and

WHEREAS, Susan Stanish was appointed to the Parks and Recreation Advisory Committee in 2017 and continued to serve on the Committee until 2024; and

WHEREAS, Susan Stanish generously shared her skills and dedication by taking an active role in shaping the future of the Town of Superior; and

WHEREAS, The Town of Superior has benefited from Susan's volunteered time and energy and thoughtful participation on the Parks and Recreation Advisory Committee.

***NOW, THEREFORE, THE TOWN OF SUPERIOR HEREBY PROCLAIMS ITS APPRECIATION TO* SUSAN STANISH *FOR HER SIGNIFICANT CONTRIBUTION TO THE COMMUNITY AND FOR HER SERVICE ON THE* PARKS AND RECREATION ADVISORY COMMITTEE.**

ADOPTED this 8th day of July 2024.

_____
Mark Lacis, Mayor

ATTEST:

_____
Lydia Yecke, Town Clerk

ITEM NO. 4d

INFORMATION FOR MEETING
OF THE SUPERIOR BOARD OF TRUSTEES

AGENDA ITEM NAME: **Resolution – Advisory Committee Appointments:** Cultural Arts and Public Places (CAPS) and Planning Commission (PC)

MEETING DATE: **July 8, 2024**

PRESENTED BY: **Matt Magley, Town Manager**

PRESENTED FOR: **Action**

BACKGROUND:
Section 2-12-40 of the Superior Municipal Code addresses membership of Town Advisory Committees, including appointments. The Cultural Arts and Public Places Committee has three vacancies and the Planning Commission has one vacancy. The Board has the option to appoint or to not appoint a candidate, and staff will continue to advertise the vacancy.

Cultural Arts and Public Places (CAPS) – 3 vacancies
- Brandon Opalka
- Susan Chevalier

Planning Commission (PC) – 1 vacancy
- Ann Shanahan

ALTERNATIVES CONSIDERED:
Make no appointment and continue to advertise.

MOTION:
Move to approve the Resolution making appointment to the Cultural Arts and Public Places advisory committee and Planning Commission.

ATTACHMENTS:
- Resolutions

TOWN OF SUPERIOR
RESOLUTION NO. R-29
SERIES 2024

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR MAKING APPOINTMENTS TO THE CULTURAL ARTS AND PUBLIC SPACES ADVISORY COMMITTEE

WHEREAS, on December 12, 2016 the Board of Trustees established the Cultural Arts and Public Spaces Advisory Committee ("CAPS") by Resolution No. R-79, Series 2016; and

WHEREAS, the Board of Trustees desires to make appointments to CAPS.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. The Board of Trustees hereby makes the following appointments to the Cultural Arts and Public Spaces Advisory Committee:

Name	**Term expires**
Brandon Opalka	**June 2026 (partial)**
Susan Chevalier	**June 2025 (partial)**

ADOPTED this 8th day of July, 2024.

_____
Mark Lacis, Mayor

ATTEST:

_____
Lydia Yecke, Town Clerk

TOWN OF SUPERIOR
RESOLUTION NO. R-30
SERIES 2024

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR APPOINTING MEMBERS TO THE PLANNING COMMISSION

WHEREAS, Commissioner Michael Barnes has completed a partial term and is eligible for an additional full term and commissioner Steve Witte has completed a second term and is eligible for an additional term; and

WHEREAS, interviews were held with interested applicants.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. The Board of Trustees hereby makes the following appointments to the Planning Commission:

Name	**Term expires**
Ann Shanahan	June 2028

ADOPTED this 8th day of July, 2024.

_____
Mark Lacis, Mayor

ATTEST:

_____
Lydia Yecke, Town Clerk

ITEM NO. 4e

INFORMATION FOR MEETING
OF THE SUPERIOR BOARD OF TRUSTEES

AGENDA ITEM NAME: **Resolution – Approving Reappointments to Advisory Committee for Environmental Sustainability (ACES), Cultural Arts and Public Spaces Advisory Committee (CAPS), Superior Historical Commission (SHC), Open Space Advisory Committee (OSAC), Planning Commission**

MEETING DATE: **July 8, 2024**

PRESENTED BY: **Matt Magley, Town Manager**

PRESENTED FOR: **Action**

BACKGROUND:
Section 2-12-40 of the Superior Municipal Code addresses membership of Town Advisory Committees, including appointment of Advisory Committee members. Scheduled under this agenda item is the Board's consideration of appointments of sitting Advisory Committee members to a new term. The Board has the option to appoint or not appoint any of the candidates, and staff will continue to advertise the vacancies.

Advisory Committee for Environmental Sustainability (ACES)
Sitting members eligible to serve a new term:

- John Schallau – completion of 1 full term, reappointing for second full term
- James Lester – completion of a partial term, reappointing for first full term

Cultural Arts and Public Spaces Advisory Committee (CAPS)
Sitting members eligible to serve a new term:

- Sherry Smith – completion of partial term, reappointing for first full term
- Stephanie Coffin - completion of partial term, reappointing for first full term

Superior Historical Commission (SHC)
Sitting members eligible to serve a new term:

- Mary Cartwright – completion of fourth term, reappointing for fifth full term

*The Board has stated they will consider reappointing Historical Commission members beyond the two-term limit due to the many years of personal connection of some members to the Town and work of the Commission. The Municipal Code provides the Board the flexibility to do so if the Board wishes. There are currently no applications pending to serve on the Historical Commission.

Open Space Advisory Committee (OSAC)
Sitting members eligible to serve a new term:

- Amber Greves - completion of 1 full term, reappointing for second full term
- Tracey Bain - completion of 1 full term, reappointing for second full term

Planning Commission (PC)
Sitting member eligible to serve a new term:

- Michael Barnes - completion of partial term, reappointing for first full term
- Steve Witte – completion of second term, reappointing for third full term

ALTERNATIVES CONSIDERED:
Make no appointments and continue to advertise to fill the vacancies.

MOTION:
Move to approve Resolutions making reappointments to ACES, CAPS, SHC, OSAC and PARC.

ATTACHMENTS:

- Resolutions
- Section 2-12-40 of the Superior Municipal Code

TOWN OF SUPERIOR
RESOLUTION NO. R-31
SERIES 2024

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR MAKING APPOINTMENTS TO THE ADVISORY COMMITTEE FOR ENVIRONMENTAL SUSTAINABILITY

WHEREAS, by Resolution #R-27, Series 2001, the Board of Trustees established the Waste Diversion Advisory Committee;

WHEREAS, by Resolution #R-80, Series 2005, the Waste Diversion Advisory Committee was changed to the Recycling and Conservation Advisory Committee ("RCAC");

WHEREAS, by Resolution #R-59, Series 2017, RCAC was changed to the Advisory Committee for Environmental Sustainability ("ACES"); and

WHEREAS, the Board of Trustees desires to make appointments to ACES.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. The Board of Trustees hereby makes the following appointments to the Advisory Committee for Environmental Sustainability:

Name	**Term expires**
John Schallau	**June 2027**
James Lester	**June 2027**

ADOPTED this 8th day of July, 2024.

_____
Mark Lacis, Mayor

ATTEST:

_____
Lydia Yecke, Town Clerk

TOWN OF SUPERIOR
RESOLUTION NO. R-32
SERIES 2024

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR MAKING APPOINTMENTS TO THE CULTURAL ARTS AND PUBLIC SPACES ADVISORY COMMITTEE

WHEREAS, on December 12, 2016 the Board of Trustees established the Cultural Arts and Public Spaces Advisory Committee ("CAPS") by Resolution No. R-79, Series 2016; and

WHEREAS, the Board of Trustees desires to make appointments to CAPS.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. The Board of Trustees hereby makes the following appointments to the Cultural Arts and Public Spaces Advisory Committee:

Name	**Term expires**
Sherry Smith	**June 2027**
Stephanie Coffin	**June 2027**

ADOPTED this 8th day of July, 2024.

_____
Mark Lacis, Mayor

ATTEST:

_____
Lydia Yecke, Town Clerk

TOWN OF SUPERIOR
RESOLUTION NO. R-33
SERIES 2024

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR MAKING APPOINTMENTS TO THE OPEN SPACE ADVISORY COMMITTEE

WHEREAS, by Resolutions R-25, R-28, and R-46, Series 2001, the Board formed the Open Space Advisory Committee ("OSAC");

WHEREAS, by Resolution R-36, 2012, the Board re-established OSAC in accordance with Article XII, Chapter 2 of the Superior Municipal Code; and

WHEREAS, the Board of Trustees desires to make appointments to OSAC.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. The Board of Trustees hereby makes the following appointments to the Open Space Advisory Committee:

Name	**Term expires**
Amber Greves	**June 2027**
Tracey Bain	**June 2027**

ADOPTED this 8th day of July, 2024.

_____
Mark Lacis, Mayor

ATTEST:

_____
Lydia Yecke, Town Clerk

TOWN OF SUPERIOR
RESOLUTION NO. R-34
SERIES 2024

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR APPOINTING MEMBERS TO THE PLANNING COMMISSION

WHEREAS, Commissioner Michael Barnes has completed a partial term and is eligible for an additional full term and commissioner Steve Witte has completed a second term and is eligible for an additional term; and

WHEREAS, interviews were held with interested applicants.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. The Board of Trustees hereby makes the following appointments to the Planning Commission:

Name	**Term expires**
Michael Barnes	June 2028
Steve Witte	June 2028

ADOPTED this 8th day of July, 2024.

_____
Mark Lacis, Mayor

ATTEST:

_____
Lydia Yecke, Town Clerk

TOWN OF SUPERIOR
RESOLUTION NO. R-35
SERIES 2024

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR MAKING APPOINTMENTS TO THE SUPERIOR HISTORICAL COMMISSION

WHEREAS, the Superior Historical Commission (the "Commission") was originally established by Resolution No. R-68, Series 2000;

WHEREAS, by Resolution #R-35, 2012, the Board re-established the Commission in accordance with Article XII, Chapter 2 of the Superior Municipal Code; and

WHEREAS, the Board of Trustees desires to make appointments to the Commission.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. The Board of Trustees hereby makes the following appointments to the Superior Historical Commission:

Name	**Term Expires**
Mary Cartwright	**June 2027**

ADOPTED this 8th day of July, 2024.

_____
Mark Lacis, Mayor

ATTEST:

_____
Lydia Yecke, Town Clerk

ITEM NO. 4f

INFORMATION FOR MEETING
OF THE SUPERIOR BOARD OF TRUSTEES

AGENDA ITEM NAME: **Resolution – Appointment of Municipal Judge and Associate Municipal Judge**

MEETING DATE: **July 7, 2024**

PRESENTED BY: **Shannon Dujardin, Court Administrator**
Matt Magley, Town Manager
Martin Toth, Assistant Town Manager

PRESENTED FOR: **Action**

BACKGROUND:
In accordance with Superior Municipal Code Section 2-4-20, appointment of the Municipal Judge and the Associate Municipal Judge occurs every two years. Scheduled under this agenda item is the Board's consideration of appointments to these two positions.

The Town's current Municipal Judge, David Thrower, was appointed in 2014, following the retirement of Judge Ron Miller. Prior to his appointment, Judge Thrower served thirteen years as the Town's Prosecuting Attorney. Judge Thrower has provided exemplary service since his appointment, and he continues to exhibit his dedication through his thoughtful approach to our Court's operation, his professionalism and thorough knowledge of the law, as well as the consistently high level of respect he demonstrates with regard to all participants in the Town's Municipal Court.

Judge Christopher Randall will serve as Associate Judge. Judge Randall would be called upon to fill-in when the Municipal Judge is unable to attend a scheduled court date, or potentially hear a case for which Judge Thrower would need to recuse himself, for example, due to a past client coming before the Town's Municipal Court.

Staff recommends the appointment of both Judge Thrower and Judge Randall as Municipal Judge and Associate Municipal Judge, respectively.

Staff recommends that the conditions of appointment remain the same as the current agreement, with an increase in compensation for the Municipal Judge from $2,500 per month

to $3,000 per month as part of the Town's effort to maintain mid-market range for Town Officers. The Judge's compensation was last adjusted in 2022. Judge Thrower's ongoing duties include three monthly court sessions, with trials as necessary, as well as a significant amount of out-of-court administrative duties that are currently required of Municipal Court operations in Colorado.

The attached Resolution appoints David Thrower as the Town's Municipal Judge and Christopher Randall as Associate Municipal Judge from August 1, 2024 to July 31, 2026.

RECOMMENDED ACTION:
Appointment of David Thrower as the Town's Municipal Judge and Christopher Randall as Associate Municipal Judge.

MOTION:
Move to adopt the Resolution appointing David Thrower as the Town's Municipal Judge and Christopher Randall as Associate Municipal Judge.

ATTACHMENTS:
- Resolution

TOWN OF SUPERIOR
RESOLUTION NO. R-36
SERIES 2024

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR APPOINTING A MUNICIPAL JUDGE AND AN ASSOCIATE MUNICIPAL JUDGE

WHEREAS, pursuant to C.R.S. § 13-10-105 and Superior Municipal Code § 2-4-20, the Board of Trustees desires to appoint a Municipal Judge and an Associate Municipal Judge to the Superior Municipal Court.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. David Thrower is hereby appointed as the Municipal Judge for the Town of Superior and Christopher Randall is hereby appointed as the Associate Municipal Judge, each for a two (2) year term commencing on August 1, 2024, and expiring on July 31, 2026.

Section 2. The duties and responsibilities of the Municipal Judge shall include the operation of the Superior Municipal Court and other responsibilities of a municipal judge as set forth by Colorado law. The Associate Municipal Judge shall perform the duties of the Municipal Judge when the Municipal Judge is unavailable.

Section 3. The Town shall pay the Municipal Judge $3,000 per month. The Town shall pay the Associate Municipal Judge $150 per hour, with a minimum of two (2) hours, for each court session the Associate Municipal Judge presides over.

ADOPTED this 8th day of July, 2024.

_____
Mark Lacis, Mayor

ATTEST:

_____
Lydia Yecke, Town Clerk

ITEM NO. 4g

INFORMATION FOR MEETING
OF THE SUPERIOR BOARD OF TRUSTEES

AGENDA ITEM NAME: **Approval of Town Board Goals Statements**

MEETING DATE: **July 8, 2024**

PRESENTED BY: **Neal Shah, Mayor Pro-tem**
Matt Magley, Town Manager

PRESENTED FOR: **Action**

BACKGROUND:
At the last Town Board work session, the Board reviewed and discussed an update to the Town Board Goals, which had not been updated for several years. The attached Goals include revisions based on the Board's discussion at the work session as well as additional revisions that reflect the current Board's goals.

ATTACHMENTS:
- Town Board Goals

TOWN BOARD GOALS

Quality of Life – Ensure all residents feel welcomed and appreciated. Continue Town actions to improve the quality of life for Superior residents by reducing noise and air pollution

Marshall Fire Recovery – Ensure the Town, the Community, and all residents are supported as needed to continue their recovery from the Marshall Fire

Provide Excellent Public Services – Continue expanding and improving upon community services by prioritizing those services needed by our Residents as Community needs continue to evolve

Maintain and Improve Excellent Public Infrastructure – Continue to maintain and improve our infrastructure by prioritizing the appropriate funding and pursue partnerships for infrastructure improvements

Realize the Town Sustainability Action Plan – Through the Sustainability Action Plan, maintain a focused effort on greenhouse gas emission reductions, increases to the waste diversion rate, reduced per-capita energy and water usage, and improvement to community air quality

Enhance Financial Stability and Business Retention – Ensure the Town's long-term financial stability by continuing to diversify revenue streams, advocate for financial self-sufficiency of utility operations, and supporting local business development and growth

Engage Residents through Outreach and Marketing – Continuously improve education, communication, and dialog between the Town, residents, and advisory groups, to maintain and improve quality of life and decision making

Strategically Manage and Enhance Open Space, Parks and Trails – Augment natural and developed open space and parks within the Town through strategic acquisitions, development and management

Promote, Manage, and Identify Development and Redevelopment Opportunities – Review development opportunities in a timely manner by reconciling public and private interests to achieve the Town's long-term vision as stated in the Town's Comprehensive Plan

ITEM NO. 5

INFORMATION FOR MEETING
OF THE SUPERIOR BOARD OF TRUSTEES

AGENDA ITEM: **Consideration of the Adoption of the Town's Strategic Housing Plan**

MEETING DATE: **July 8, 2024**

PRESENTED BY: **Lisa Ritchie, AICP, Planning and Building Director**

PRESENTED FOR: **Action**

BACKGROUND:
The Town of Superior received an Innovative Housing Planning (IHOP) Grant in December of 2021 from Colorado's Department of Local Affairs (DOLA) to create the Town's first Strategic Housing Plan and Housing Needs Assessment (HNA). The grant funding helps to further the Town's efforts related to housing, particularly affordable housing. The Town hired ECOnorthwest and MIG to assist with development of the HNA and the Strategic Housing Plan.

The Town's 2012 Comprehensive Plan calls for a mix of housing types at varied prices. In 2018, the Town signed on to the Boulder County Regional Housing Partnership goal of 12% of the County's housing stock be affordable by 2035. In 2020, the Town adopted an Inclusionary Housing Ordinance requiring affordable housing with certain developments. In 2023, the Town opted in to State Proposition 123, which among other things, requires the Town approve building permits for 22 units of affordable housing. To date, the Town has no deed restricted housing.

By accepting the grant funding, the Town committed to adopting qualifying policy and regulatory strategies for affordable housing. The draft Strategic Housing Plan includes many of the qualifying strategies identified by DOLA. The complete list from DOLA is included as an attachment.

This memo describes the findings and key recommendations of the Housing Needs Assessment, a summary of the Public Engagement efforts, suggestions for implementation of the Strategic Housing Plan, and finally a summary of the Strategic Housing Plan itself.

HOUSING NEEDS ASSESSMENT:

In September 2023, the Town Board heard a presentation by Town staff and the consultant team sharing the preliminary results of the Housing Needs Assessment. The Housing Needs Assessment is the starting point for the Strategic Housing Plan and forms the basis of understanding housing related issues in Superior, both current and projected into the future. The final HNA is provided as an attachment. The following summarizes some of the demographic findings within the HNA:

The population of Superior is generally younger, and most households consist of families with children.

- Superior's population skews younger; 30% of residents are under age 19, and 29% of residents are between 25 and 44 years old.
- Approximately 40% of households are couples with children, and half of Superior's households consist of three or more persons, indicating that these household characteristics are likely those of families.

Superior's senior population is rapidly growing. This growth is unlikely to slow as Millennials and GenXers grow older.

- Seniors aged 65 years and older experienced the fastest growth since 2011, increasing by 246%, suggesting that Superior is experiencing a substantial aging trend. This could be due to factors such as access to health care, an attractive environment for retirees, families aging in place, or an influx of older adults seeking a peaceful lifestyle.
- Millennials and Gen Xers represent about 57% of Superior's population. As this population ages, Superior's senior population will continue to grow.

Renter households are typically smaller in size (1 and 2-person households) and generally live in apartments.

- About 62% of renter-occupied housing in Superior is occupied by households with one to two persons.
- Owner-occupied housing is generally occupied by families with three or more persons.

Superior is an affluent community where households have one of the highest median household incomes in the county.

- In 2021, Superior had a median household income of $131,000 — the second-highest median household income when compared to the following comparison cities of Erie, Lafayette, Louisville, Longmont, and Boulder.
- Incomes for owner households are generally higher than renter households.

Superior's population has grown to be more racially and ethnically diverse.

- While the majority (70%) of Superior's population identifies as White, the number of racial and ethnic groups has increased since 2011. The Asian population is the second-largest racial group (17%), followed by the Hispanic population (9%).
- The Black or African American population was the only racial group that experienced a decrease since 2011.

Next, the following summarizes some of the current housing conditions within Superior:

The majority of superior's housing stock is single-family detached—with a limited diversity of housing types.

- The majority (60%) of housing inventory in Superior is single-family detached. Superior primarily built single-family homes throughout the 2000s and 2010s. Only starting in 2020 did multifamily building permits outnumber single-family permits.

The Marshall Fire has further exacerbated the lack of available housing in Superior. While demand for housing is high, overall housing vacancy is very low.

- The Marshall Fire of 2021 destroyed 390 residential properties (approximately 8% of the Town's housing units) and 4 commercial properties.
- Superior had a housing vacancy of 2.5% in 2021, one of the lowest among Erie, Lafayette, Louisville, Longmont, and Boulder. For comparison, Boulder County had a housing vacancy rate of 5.9% in 2021.

Homeownership rates have fallen in Superior as increasing numbers of households tend to rent.

- In Superior, homeownership rates have decreased 10% since 2010, while homeownership rates remained stable in Boulder County and Colorado.
- The share of Superior households who rent increased from 30% in 2011 to 40% in 2021. This underscores the significance of having rental housing that is both of good quality and reasonably priced, and increasing opportunities for home ownership in the Town.

Incomes have not kept pace with rising housing costs, and housing attainability in Superior has become challenging for many residents.

- While a household earning 100 percent of the area median income ($144,100 is AMI for a family of four in Boulder County in 2023) can afford the average rent, they cannot afford to purchase a home at the median price ($724,300). A Superior household would need to make $181,000 or more to afford a median-priced home in 2023. This suggests that higher-income households likely have a better chance of homeownership while lower and median-income households might be limited to renting.
- The inability of a moderate-income household to afford the median-priced home raises questions about the potential barriers to homeownership in Superior. Factors like high down payment requirements, stricter mortgage lending criteria, and rising home prices relative to income growth can make it difficult for many households to enter the homeownership market.
- In 2021, about 40% of renter households in Superior were considered cost burdened.

The HNA identified the following housing types needed in the future:

Superior needs a diversity of housing types to support the needs of its existing residents and those who are employed in superior but can't afford to live here. Increasing the supply of both renter and ownership housing units is important for Superior.

- If the demand for housing, particularly for homeownership, exceeds the available supply, it can drive up home prices and make it challenging for households with moderate incomes to purchase a home. Similarly, if the demand for rental housing exceeds the available supply, it can drive up rent prices and price out households that rent in Superior.

- Downtown Superior, a key growth area, has added several hundred housing units of diverse housing types. These newly built housing units can help meet some of the town's housing needs; however, Superior should continue looking for strategic locations for infill development.

As Superior's population ages, there will be a growing need for housing to accommodate this demographic group.

- Superior's aging population will need housing that meets various household needs, such as wanting to downsize, aging in place, or multigenerational living.
- Increasing property tax valuations have led to large increases in property tax, impacting the ability of households with fixed incomes to remain in their homes.

Superior will have more middle-aged millennials wanting to enter the homeownership market.

- As they age, more Millennials are likely to desire to own their homes. As a result, there will be an increased demand for starter homes and relatively affordable types of ownership and rental housing.
- Additionally, to accommodate the housing needs of this population group, there will need to be more one- and two-bedroom housing units and housing options near major employment centers and services.

Ultimately, the HNA does not provide a target number of housing units required for the Town, rather it focuses on qualitative descriptions of housing gaps and needs within the Town. The following summarizes the key findings of the HNA:

- **Affordability**: Reduce the cost of housing for households, especially for low-income and cost-burdened households
- **Housing Supply**: Increase the inventory and variety of housing to meet the diverse needs of Superior households
- **Senior Housing:** Increase the stock of housing options for aging adults
- **Improve Access to Housing Resources:** Increase awareness of housing programs and services to residents and form partnerships to close the gap in housing resources.

PUBLIC ENGAGEMENT:

In order to develop the HNA and the Strategic Housing Plan, town staff and the consultant team conducted extensive, on-going public engagement throughout the process. Appendix C of the plan includes a more detailed public engagement summary. Staff specifically notes that this appendix includes details on public support for each draft strategy. Additionally, staff notes that the draft strategies were modified slightly following input from Planning Commission, so what is in the appendix and what is in the plan currently do not directly align.

The following opportunities for engagement were held, along with rough numbers for participation:

- ShapeSuperior project page launched in June of 2023 and served as a hub for project information and hosted various opportunities for online input throughout the project.
    - 6,200+ total visits

- Online survey to assess housing needs as a supplement to other sources of data collected and analyzed (August – October, 2023)
    - 247 survey responses
- Hosted table at Summer Concert Series to promote project (September, 2023)
    - Roughly 50 people visited
- Hosted table at Chili Fest to promote project (September, 2023)
    - Roughly 75 people visited
- Kickoff Open House to promote project and solicit input on housing needs (September, 2023)
    - 5 people
- Two facilitated stakeholder focus group conversations with advocates who work with special interest groups, such as IDD, seniors, and low-income individuals (January, 2024)
- Two meetings with Superior Advisory Committees (February and March, 2024)
    - Superior Youth Leadership Committee
    - Advisory Committee on Environmental Sustainability
- Two meetings with Planning Commission (February and May, 2024)
- Social media and email storytelling campaign (February and March, 2024)
    - 130 survey responses
- Two open house events sharing draft strategies and to gather input on preferences and priorities (March 2024)
    - Roughly 40 people attended
- Online surveys to gather input on draft strategies and preferences and priorities. Surveys were split for each of the three objectives (March and April, 2024)
    - Increase Housing Choices for People: 392 responses
    - Support and Promote Local and Regional Affordable Housing Efforts: 303 responses
    - Remove Housing Barriers for Those Who Often Encounter Them: 309 responses
- Online opportunity to provide input on draft Strategic Housing Plan (June and July, 2024)
    - As of July 2, 22 comments have been received

Detailed written responses and answers to each of the online surveys is provided as an attachment.

IMPLEMENTATION:

The Strategic Housing Plan is an important step for the Town, but by itself cannot realize change. Adoption of the plan sets forth the next steps and priorities the Town can pursue over time. The plan sets forth the following principles for implementation, with complete descriptions in the full document:

- Be action-oriented and embrace incremental progress
- Aim for mixed-income outcomes
- Pursue geographic dispersion
- Get the right project in the right place

- Support other affordable housing developers when possible and lead when necessary
- Act regionally

Any actions the Town takes with respect to housing is only one factor of the total influences on the housing market and affordability, and staff acknowledges that Town actions can only impact outcomes to a certain degree. Superior is experiencing similar challenges as our neighbors, broader region, as well as a good portion of the United States. To expect that the Town can influence the affordability issue in entirety is unreasonable. However, there are many actions the Town could take to make incremental improvements, and improve outcomes for current and future Town residents.

Many of the recommendations of the plan will require funding, partnerships, staff time and other resources. Included with each recommended action is the following table with implementation considerations:

Timeline:	Short-term (1-2 years), Mid-term (3-5 years), Long-term (5+ years)
Action:	What level of time commitment is needed. One-time or On-going.
Partners:	What partners might be needed to support implementation.
Level of Effort	The level of staff time, resources, and potential funding to implement the action: Low, Moderate, High.
Income Level Served:	The income-level that this action will serve.
Impact Level:	What is the likely impact of this action: Low, Medium, and High.
Strategy Type:	 Programmatic  Funding  Housing Production  Regulatory  Partnership

Staff acknowledges that complete implementation of the plan would be resource intensive and difficult to achieve. However, adoption of the entire plan is recommended so that the policy support for each item is in place if and when the opportunity arises for action. In terms of funding sources beyond the Town budget, the voters of Boulder County passed the Affordable and Attainable Housing Tax in 2023 and funds are increasingly available from the State of Colorado through Proposition 123 and other measures. While the distribution methods and funding amounts of these sources is still developing, the Town will likely have access to some financial resources to assist with implementation of the recommendations. Once these are better understood, staff recommends follow-up discussions with the Town Board to prioritize actions and next steps.

Additionally, staff notes that this plan does not discuss development of housing on specific property in Town. This plan discusses what housing is needed, and the upcoming Comprehensive Plan Update can further these discussions by determining where certain housing is appropriate.

SUMMARY OF THE STRATEGIC HOUSING PLAN:
The Strategic Housing Plan sets forth three objectives, followed by Strategies and Actions the Town can take related to each objective. Collectively, these support improvement to the issues identified in the HNA, along with satisfaction of the requirements of the grant. Staff notes where any action is impacted or will be influenced by recently adopted State legislation.

Objective 1: Increase Housing Choices for People
Objective 2: Support and Promote Local and Regional Affordable Housing Efforts
Objective 3: Remove Housing Barriers for Those Who Often Encounter Them

Within the plan, there are detailed strategies and actions associated with each objective, summarized below:

Objective 1: Increase Housing Choices for People

1.1 Remove regulatory barriers to support the production of various housing types, including missing middle housing, senior housing, multifamily housing, and mixed-use housing.

- Parking reductions
    - *The Town is subject to recent State legislation requiring reductions in parking for certain housing developments. More details will follow.*
- Clear and objective standards
- Pre-approved plan sets for desired housing

1.2 Increase opportunities for Accessory Dwelling Unit (ADU) development.

- Allow ADUs town-wide
    - *The Town is subject to recent State legislation regarding allowances of ADUs town-wide. More details will follow.*
- Update development standards to make ADUs easier
- Explore incentives to promote ADU development

1.3 Promote the development of Missing Middle Housing

- Consider moderate density increases in single-family areas
- Identify locations for small-lots and smaller housing units

Objective 2: Support and Promote Local and Regional Affordable Housing Efforts

2.1 Support existing and create new partnerships to address affordable housing needs

- Partner with organizations to support creation of affordable housing

2.2 Create an incentive program and pair it with the existing Inclusionary Housing Ordinance to promote the creation of affordable housing.

- Incentivize affordable housing development with height & density bonuses, and parking & landscaping reductions
- Expedite review processes for affordable housing
- Subsidize or reduce fees for affordable housing

2.3 Explore funding or partnerships to reduce the cost of land for affordable housing.

- Create a land donation, land acquisition or land banking program

2.4 Explore opportunities to generate and manage revenue for affordable housing development.

- Housing Trust Fund to support affordable housing
- Commercial and/or residential linkage fee to support affordable housing
- Establish Fee-in-Lieu amounts for Inclusionary Housing Ordinance

Objective 3: Remove Housing Barriers for Those Who Often Encounter Them

3.1 Promote housing choices for seniors.

- Programs and partnerships to support housing rehab for seniors
- Land Use policy changes to support development of senior housing
- Incentives that promote the creation of senior housing

3.2 Promote housing for people with intellectual and developmental disabilities.

- Support/partner with housing providers that support people with IDD
- Evaluate Town's group home regulations to identify barriers to group home development

3.3 Improve access to housing resources.

- Create centralized webpage with housing information
- Advocate for and support regional and state tenant protection programs

3.4 Support English Language Learners and BIPOC residents.

- Form partnerships and work with culturally specific organizations to promote programs, incentives, housing availability
- Remove language barriers to accessing housing resources and information

STAFF RECOMMENDATION:
Staff requests consideration and adoption of the Strategic Housing Plan.

ATTACHMENTS:

- Resolution
- Presentation
- Draft Strategic Housing Plan
- DOLA Qualifying Strategies
- Housing Needs Assessment
- Public Engagement Materials
- Comments on draft Strategic Housing Plan

TOWN OF SUPERIOR
RESOLUTION NO. R-37
SERIES 2024

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR APPROVING THE STRATEGIC HOUSING PLAN

WHEREAS, the Town received a grant from the Colorado Department of Local Affairs ("DOLA") to fund the development of the Town's 2024 Strategic Housing Plan;

WHEREAS, the 2024 Strategic Housing Plan advances policies and initiatives to improve outcomes related to housing for current and future Town residents;

WHEREAS, the 2024 Strategic Housing Plan went through extensive public engagement to understand housing needs and hear from Town residents on the recommendations included within the Plan; and

WHEREAS, the Town recognizes that it must take an active role in actions related to housing meet local needs.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. The 2024 Strategic Housing Plan is hereby approved in the form attached hereto.

ADOPTED this 8th day of July, 2024.

_____
Mark Lacis, Mayor

ATTEST:

_____
Lydia Yecke, Town Clerk

HOUSING

NEEDS ASSESSMENT & STRATEGIC PLAN

Town Board Meeting

July 8, 2024

Town of Superior

ECO northwest

MIG

Regional and Local Efforts

- **2018** – Town adopts County-wide goal of 12% affordable
- **2020** – Town of Superior Inclusionary Housing Ordinance
- **2021** – IHOP Grant Awarded for Housing Plan
- **2023** – Proposition 123

- **2023/2024** – Strategic Housing Plan
- **2024/2025** – Comprehensive Plan Update

Housing Needs Assessment (HNA)

Key Findings:

Demographics

- Superior's population is growing.
- Superior is generally younger; families with children.
- Superior's senior population is rapidly growing.
- Superior is more racially and ethnically diverse than it used to be.

Housing

- The Marshall Fire exacerbated the lack of available housing.
- Superior's housing inventory lacks enough diversity.
- Incomes have not kept pace with the rising housing costs.

Housing Needs Assessment (HNA)

Affordable Housing Qualifications for Superior (2023 HUD MFI):

If your household earns:				
$43,200	**$86,500**	**$115,300**	**$144,100**	**$172,900**
30% of AMI	*60% of AMI*	*80% of AMI*	*100% of AMI*	*120% of AMI*
Then they can afford:				
$1,080 **Monthly Rent**	$2,160 **Monthly Rent**	$2,880 **Monthly Rent**	$3,600 **Monthly Rent**	$4,320 **Monthly Rent**
OR	**OR**	**OR**	**OR**	**OR**
	$260,000-$303,000 **Home Sale Price**	$404,000-$461,000 **Home Sale Price**	$504,000-$576,000 **Home Sale Price**	$605,000-$692,000 **Home Sale Price**
Related Occupation:				
Construction Worker	**Web Developer**	**Chemical Engineer**	**Data Scientist**	**HR Manager**
$43,290/ $20.81 hr	*$86,120/ $41.41 hr*	*$116,580/ $56.60 hr*	*$141,740/ $68.14 hr*	*$175,350/ $84.31 hr*

What are Superior's most pressing housing issues?

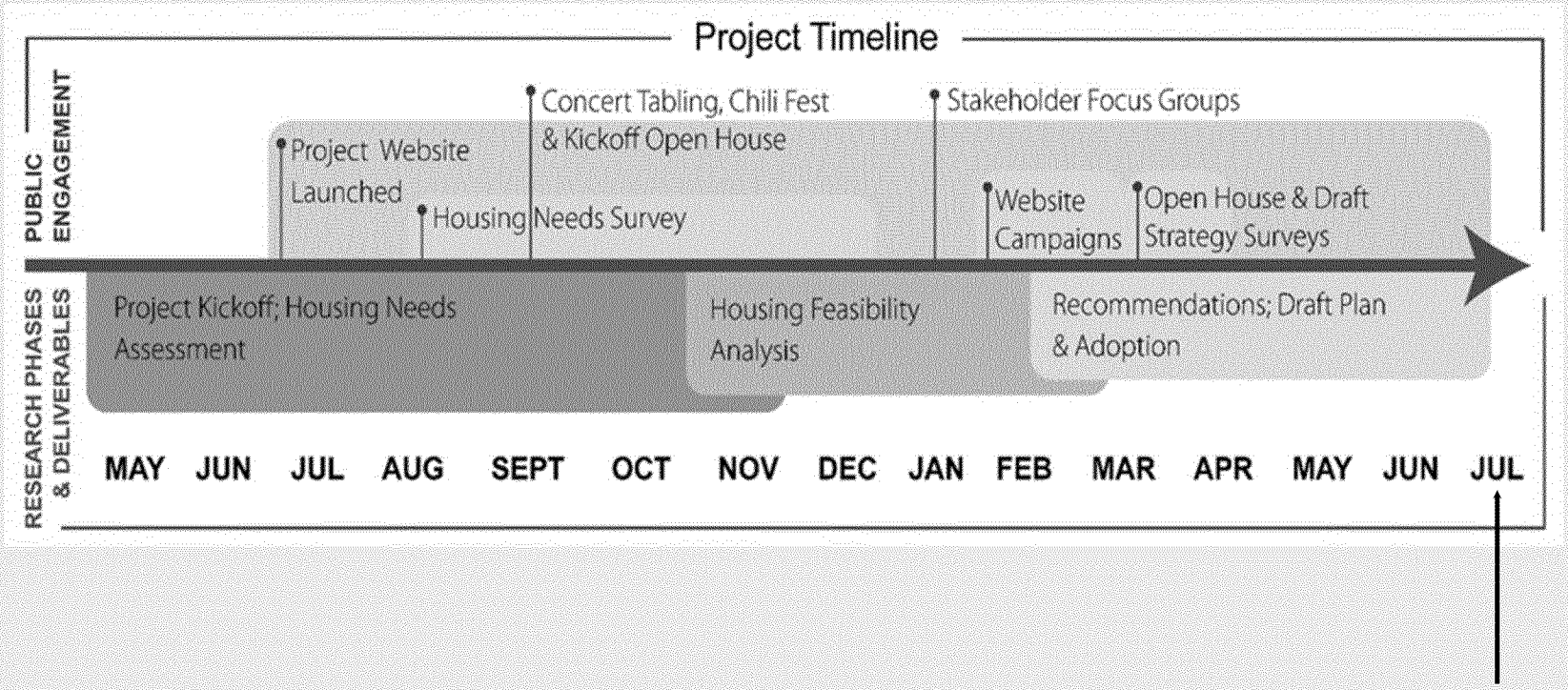
Housing Needs Assessment (HNA) & Public Outreach and Engagement

Identified the following as the most pressing housing issues:

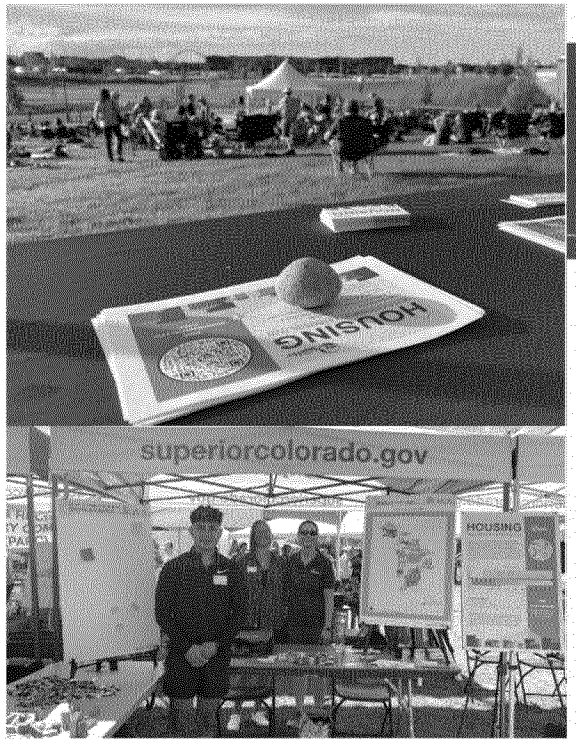
- **Affordability:** *Reduce the cost of housing for households, especially for low-income and cost-burdened households.*
- **Housing Supply:** *Increase the inventory and variety of housing to meet the diverse needs of Superior households.*
- **Senior Housing:** *Increase the stock of housing options for aging adults.*
- **Improve Access to Housing:** *Increase awareness of housing programs and services to residents and form partnerships to close the gap in housing resources.*

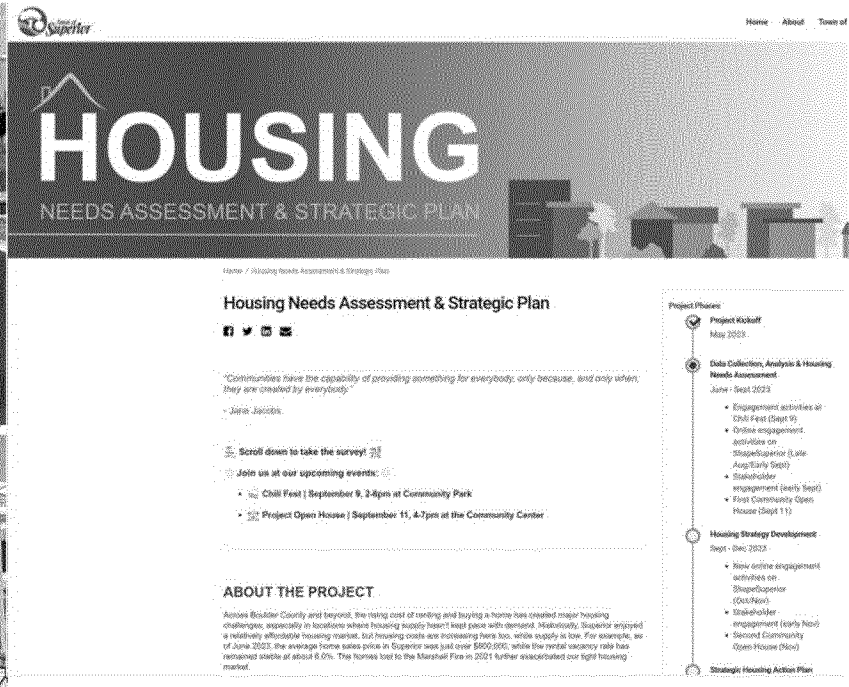
Public Outreach & Engagement Summary

Project Timeline



- 1 ShapeSuperior Website
  - 6,100 total visits
  - 1,100+ engaged visits
  - 900+ downloads of draft Housing Plan
- 2 Booths at Community Events
- 3 Open Houses
- 4 Stakeholder Interview Events
- 7 Online Surveys and Engagement Prompts
  - 1,005 total responses



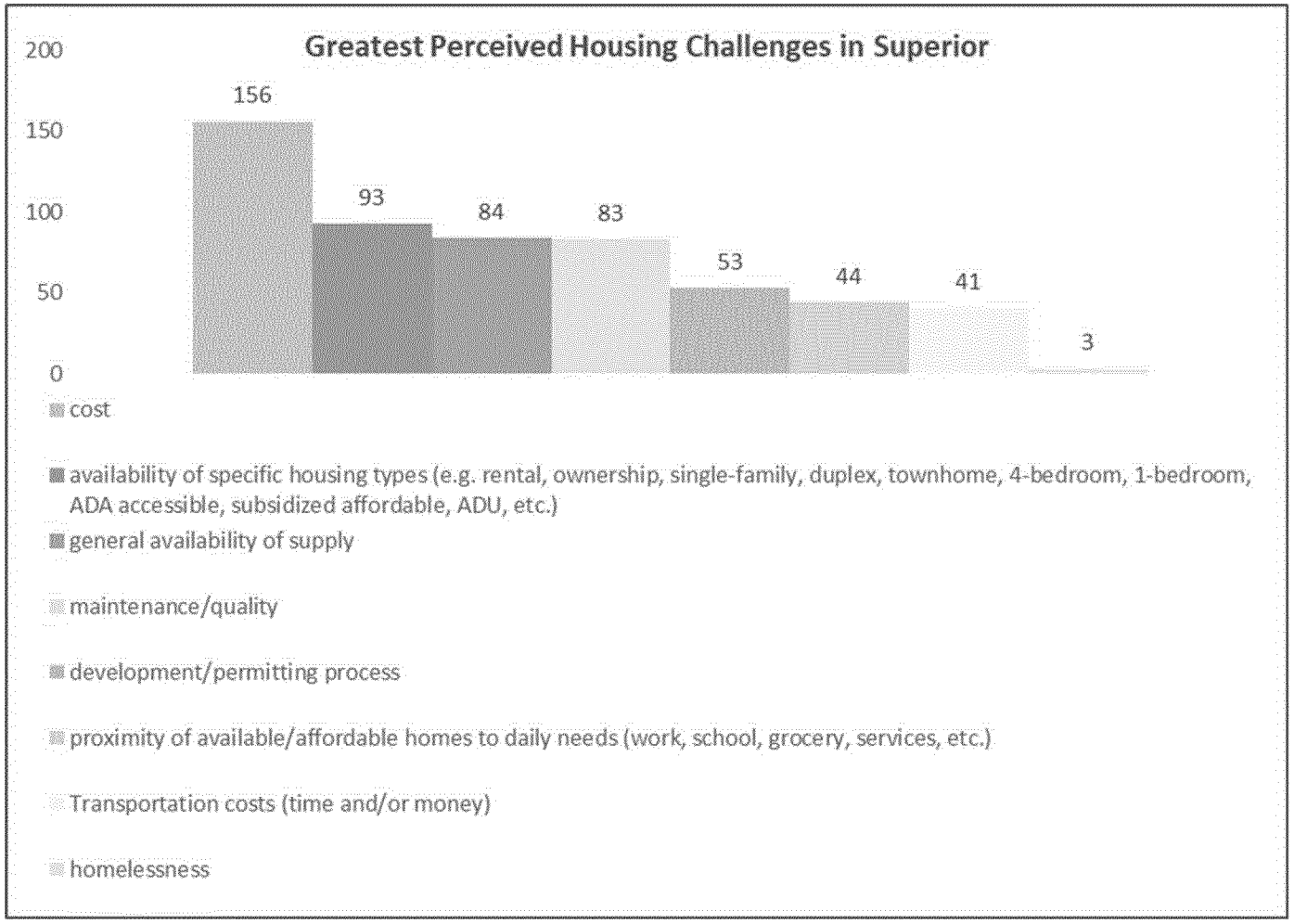


"We need to find ways to increase housing supply and provide affordable housing so we can be an inclusive community."

"By building more (affordable) housing you're essentially reducing the cost of existing homeowners equity"

Key Themes

Survey Responses



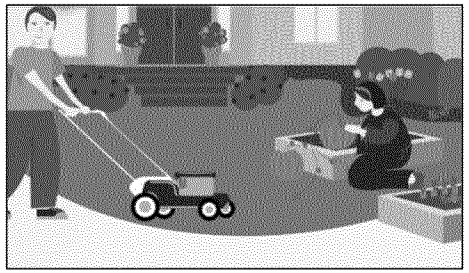
Key Themes

Public Outreach

What we heard:

- *Variety of the "Do nothing" concept*
  - *Allow the market to dictate housing*
  - *Concern that Apartments & "Affordable" housing reduce property values for existing residents*
  - *Concern with density, neighborhood character, and traffic*
- *Do not increase property taxes*

+ Allow Smaller Housing on Small Lots
+ Increase Housing Options and Support for Seniors
+ More Housing Options for All
+ Allow more Mixed-Use Residential
+ Build Subsidized Affordable Housing
+ Allow Accessory Dwelling Units (ADUs)
+ Expand Funding and Support Programs
+ Eliminate Occupancy Limits



Jack & Diane



Tyler



Paul & Edna

Strategic Housing Plan

A Guide to Decision-Making

Strategic Housing Plan Principles

The following guidelines will help the Town of Superior maintain focus and adaptability in its pursuit of housing goals, while reflecting community values, aspirations, and contextual realities:

1. **Be action-oriented and embrace incremental progress.**
2. **Aim for mixed-income outcomes.**
3. **Pursue geographic dispersion.**
4. **Get the right project in the right place.**
5. **Support other affordable housing developers when possible and lead when necessary.**
6. **Act regionally.**



Structure of Strategic Housing Plan

Strategic Plan Structure

3 Objectives
- 11 Strategies
  - 25 Actions

Information included with each Action:

Timeline:	Short-term (1-2 years), Mid-term (3-5 years), Long-term (5+ years)
Action:	What level of time commitment is needed. One-time or On-going.
Partners:	What partners might be needed to support implementation.
Level of Effort	The level of staff time, resources, and potential funding to implement the action: Low, Moderate, High.
Income Level Served:	The income-level that this action will serve.
Impact Level:	What is the likely impact of this action: Low, Medium, and High.
Strategy Type:	 Programmatic  Funding  Housing Production  Regulatory  Partnership

Objective 1:
Increase Housing Choices for People

1.1 Remove regulatory barriers to support the production of various housing types, including missing middle housing, senior housing, multifamily housing, and mixed-use housing.

- *Parking reductions (The Town is subject to recent State Legislation, more details will follow)*
- *Clear and objective standards*
- *Pre-approved plan sets for desired housing*

1.2 Increase opportunities for Accessory Dwelling Unit (ADU) development.

- *Allow ADUs town-wide (The Town is subject to recent State Legislation, more details will follow)*
- *Update development standards to make ADUs easier*
- *Explore incentives to promote ADU development*

1.3 Promote the development of Missing Middle Housing

- *Consider moderate density increases in single-family areas*
- *Identify locations for small-lots and smaller housing units*

Objective 2:
Support and Promote Local & Regional Affordable Housing Efforts

2.1 Support existing and create new partnerships to address affordable housing needs

- *Partner with organizations to support creation of affordable housing*

2.2 Create an incentive program and pair it with the existing Inclusionary Housing Ordinance to promote the creation of affordable housing.

- *Incentivize affordable housing development with height & density bonuses, and parking & landscaping reductions*
- *Expedite review processes for affordable housing*
- *Subsidize or reduce fees for affordable housing*

2.3 Explore funding or partnerships to reduce the cost of land for affordable housing.

- *Create a land donation, land acquisition or land banking program*

2.4 Explore opportunities to generate and manage revenue for affordable housing development.

- *Housing Trust Fund to support affordable housing*
- *Commercial and/or residential linkage fee to support affordable housing*
- *Establish Fee-in-Lieu amounts for Inclusionary Housing Ordinance*

Objective 3:
Remove Housing Barriers for Those that Encounter Them

3.1 Promote housing choices for seniors.

- *Programs and partnerships to support housing rehab for seniors*
- *Land Use policy changes to support development of senior housing*
- *Incentives that promote the creation of senior housing*

3.2 Promote housing for people with intellectual and developmental disabilities.

- *Support/partner with housing providers that support people with IDD*
- *Evaluate Town's group home regulations to identify barriers to group home development*

3.3 Improve access to housing resources.

- *Create centralized webpage with housing information*
- *Advocate for and support regional and state tenant protection programs*

3.4 Support English Language Learners and BIPOC residents.

- *Form partnerships and work with culturally specific organizations to promote programs, incentives, housing availability*
- *Remove language barriers to accessing housing resources and information*

Implementation Steps

- **Staff recommends adopting the Strategic Housing Plan**
  - By accepting the DOLA grant, the Town agreed to take certain actions
- **Use as guidance for the Housing and Land Use components of the Comprehensive Plan Update**
  - Strategic Housing Plan is the "*what we need to do*"; the Comp Plan is the "*where we need to do it*"
- **Identify funding opportunities and priorities for implementation**
  - Town Board Work Session discussions
  - Town budgets
  - Boulder County's Affordable and Attainable Housing Tax (2023 Ballot Measure 1b)
  - State funding programs (DOLA and Prop 123)









2024 STRATEGIC HOUSING PLAN

Town of Superior

Acknowledgments

The Town of Superior thanks the Colorado Department of Local Affairs (DOLA) for the award of funding to assist with development of the Town's first Strategic Housing Plan.

BOARD OF TRUSTEES

Mayor Mark Lacis

Mayor Pro-Tem Neal Shah

Sandie Hammerly

Jenn Kaaoush

Bob McCool

Stephanie Miller

Jason Serbu

TOWN OF SUPERIOR

Matt Magley, Town Manager

Lisa Ritchie, Planning and Building Director

Renae Stavros, Planner III

Geoffrey Weathers, Planner I

Emily Clapper, Management Analyst II

Alex Haefling, Planning/Permit Technician

STAKEHOLDER GROUPS

Stakeholders included representatives of:

Boulder Association of Community Living (ACL)

Blue Spruce Community

Boulder County Housing Authority

Sister Carmen Community Center

Town of Superior residents

CONSULTANT TEAM

ECOnorthwest

MIG, INC

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1. Introduction

A Call to Action

The Town of Superior developed its Strategic Housing Plan as a response to a changing housing market, scarce vacant land availability, and a widespread need for high-quality, affordable housing opportunities for all.

Housing prices continue to rise across Boulder County and the broader region, impacting residential communities differently. The Town of Superior is one of many communities in the County searching for tailored solutions to address its specific housing needs and challenges. Superior faces similar issues to other regional communities, including the unaffordability of rental and homeownership options, increasing construction costs, and limited available land. However, Superior also has distinct challenges that necessitate focused solutions.

The Colorado Department of Local Affairs (DOLA) awarded the Town of Superior an "Innovative Housing Planning Grant Program" (IHOP) grant to fund consultant services to assist town staff in developing a Housing Needs Assessment (HNA) and Strategic Housing Plan. The strategic plan aims to help the Town of Superior understand its current housing characteristics, Town demographics, and housing needs. In recieving this grant, the Town committed to adoption of strategies and implementation of zoning code and policy updates that incentivize and/or reduce barriers to affordable housing development.

What is Affordable Housing?

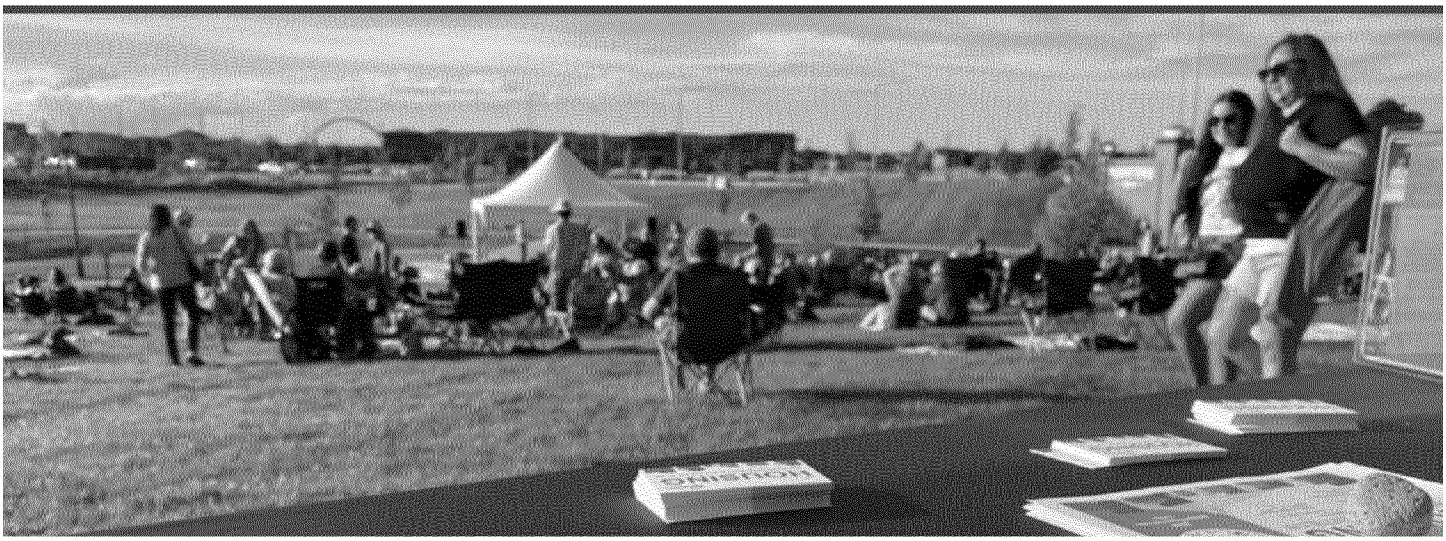
Housing is defined as affordable if its occupants pay no more than 30 percent of their income toward rent and utilities or for mortgages, taxes, and insurance.

What is a Strategic Housing Plan?

A Strategic Housing Plan (the "Plan") is a road map for the Town of Superior to follow to further its housing objectives. This Plan provides a framework of programmatic, funding, regulatory, and partnership actions that Superior can implement to better meet a wide range of housing needs and increase the overall supply of affordable housing.

The Plan also outlines three strategic objectives that will guide implementation over the next decade:

1. Increase housing choices for people.
2. Support and promote local and regional affordable housing efforts.
3. Remove housing barriers for people who often encounter them.



Where did the Plan Strategies come from?

The strategies elevated in this Plan stem from various components of this project, including feedback from the public and other stakeholders, a review of existing development standards and regulations, findings from the Housing Needs Assessment, DOLA's qualifying strategies, and best practices across communities in the Front Range. The Plan strategies were developed based on the following:

- Housing Needs Assessment
- Development Feasibility Analysis
- Community Engagement Events and Open Houses
- Online Survey
- Stakeholder Group Engagement Interviews
- Consultant and Staff Experience

Background

Why does the Town of Superior need to address housing affordability?

The Town of Superior is a great place to live and to do business. However, the scarcity of housing choices threatens the Town's well-being and future economic success. Many residents in Superior have unmet housing needs. One measure of housing need is 'cost-burden' which indicates if people might have trouble paying for their homes and risk having to move. Two in five renters in Superior pay more than 30 percent of their income on housing, requiring them to make difficult choices among what necessities they can afford. Similarly, about one in five homeowners pays more than 30 percent of their income on housing. While homeowners are less likely to be affected by changes in the housing market, mostly due to mortgages being fixed for a long period of time, renters are more vulnerable to price changes in the housing market.

Overall, making housing affordable is not just about offering attainable homes. It's about promoting economic growth, equity, and environmentally sustainable town development.

What does affordable housing mean?

Affordable housing refers to the degree to which a household or individual can afford to pay for housing without experiencing financial hardship or sacrificing other essential needs.

According to the US Department of Housing and Urban Development (HUD), affordable housing refers to a residence that a household or family can acquire—either through buying, renting, or other means—that requires payment of no more than 30 percent of the household's income. Typically, households paying more than 30 percent of their annual income toward housing are considered to be "cost burdened."

Do "affordable housing" and "subsidized housing" mean the same thing?

Affordable housing and subsidized housing are related but distinct concepts. Affordable housing refers to homes that are priced so that they do not exceed 30 percent of a household's income, making them manageable for those with a median or lower income. Some housing is naturally affordable due to market conditions and/or household incomes. Affordable housing can also be influenced by government and private entities through policies, programs, and actions which may not result in direct financial support to a household.

Subsidized housing involves direct financial and policy assistance from governments or private entities to help low and moderate-income families afford housing, among other reasons. This support can include rent assistance, tax credits, or incentives for developers to build affordable units.

What are the social and economic benefits of affordable housing?

Affordable housing offers several social benefits. It helps reduce poverty by allowing families to spend less on housing and more on necessities like food, healthcare, and education. It also supports community stability, as people are less likely to move frequently when they can afford their homes. This stability can enhance neighborhood cohesion and social connections, making communities safer and more engaged. Having access to affordable housing can lead to better health outcomes, as financial stress decreases and living conditions improve. These outcomes can have a pronounced effect on the lives of the most vulnerable, particularly children and seniors.

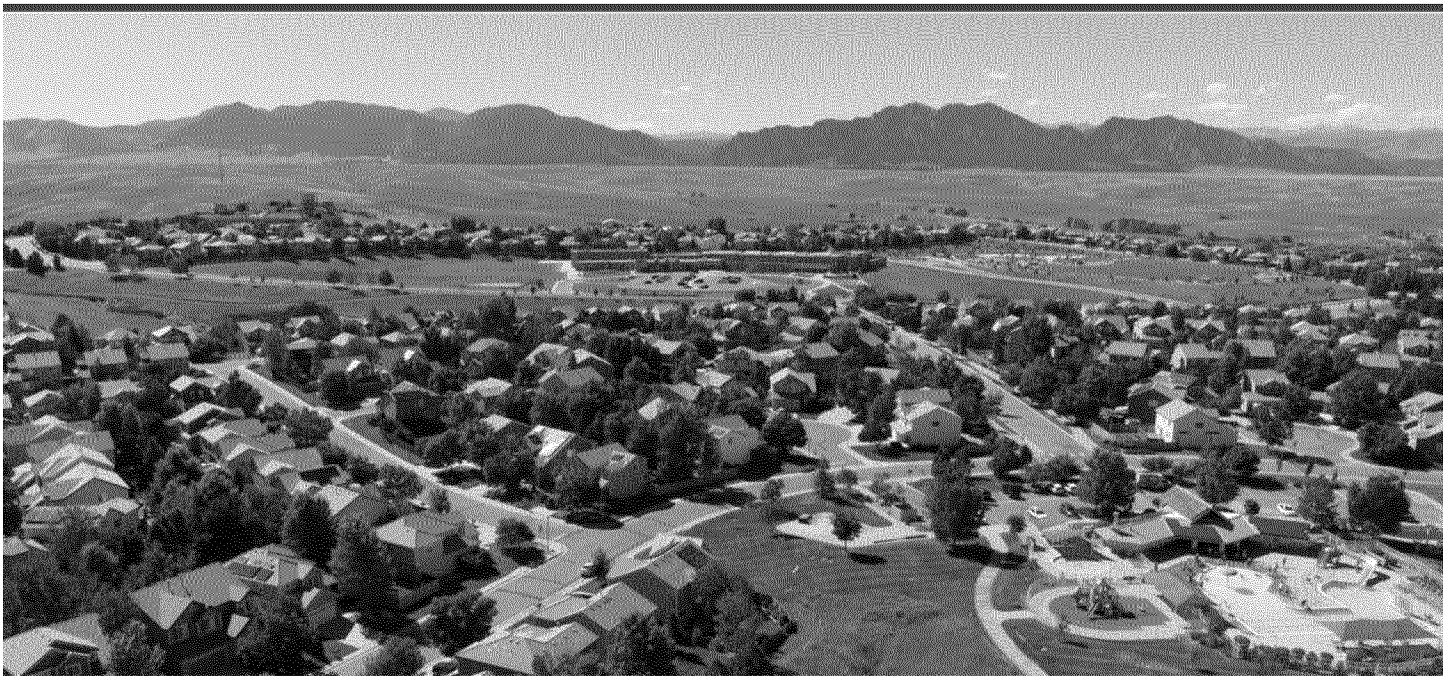


Communities with accessible, affordable housing can attract and retain a diverse workforce, essential for maintain community services. It allows essential workers such as baristas, teachers, and police officers to live near their jobs, reducing commuting costs and enhancing job satisfaction.

What are the environmental benefits of affordable housing?

Nationwide, conventional housing development has contributed to converting rural land to housing development at a rate three times faster than population growth and a rise in vehicle miles traveled trip triple the population growth rate. Conventional, large-lot dispersed housing development challenges our ability to maintain and protect air and water quality, as well as local governments' ability to finance and maintain infrastructure including schools, utilities, street networks, and police and fire protection.

Housing is commonly more affordable on the outer edges of metropolitan regions, which results in a "drive until you qualify" for many who desire homeownership. New housing in areas with existing development is typically more compact, which can result in less water and energy use and allow households to locate closer to jobs, which reduces vehicle miles traveled. Reducing vehicle miles traveled has several community-wide benefits, including improved air quality, reductions in energy use, and less required maintenance on public roadways.



The Language of Housing

Affordable Housing – Housing that costs no more than 30 percent of a household's total, pre-tax income.

Area Median Income (AMI) – The area median income (AMI) is the midpoint of a community's income distribution, which means that 50 percent of the households in that community have a total, pre-tax income higher than the AMI and 50 percent of the households in the community have a total, pre-tax income lower than the AMI.

Cost Burdened Household – A household is considered "cost burdened" when it spends more than 30 percent of its total, pre-tax income on housing (including utility payments).

Extremely Low-Income Households – A household is considered to be an 'extremely low-income household' when its total, pre-tax income is less than 30 percent of the community's AMI.

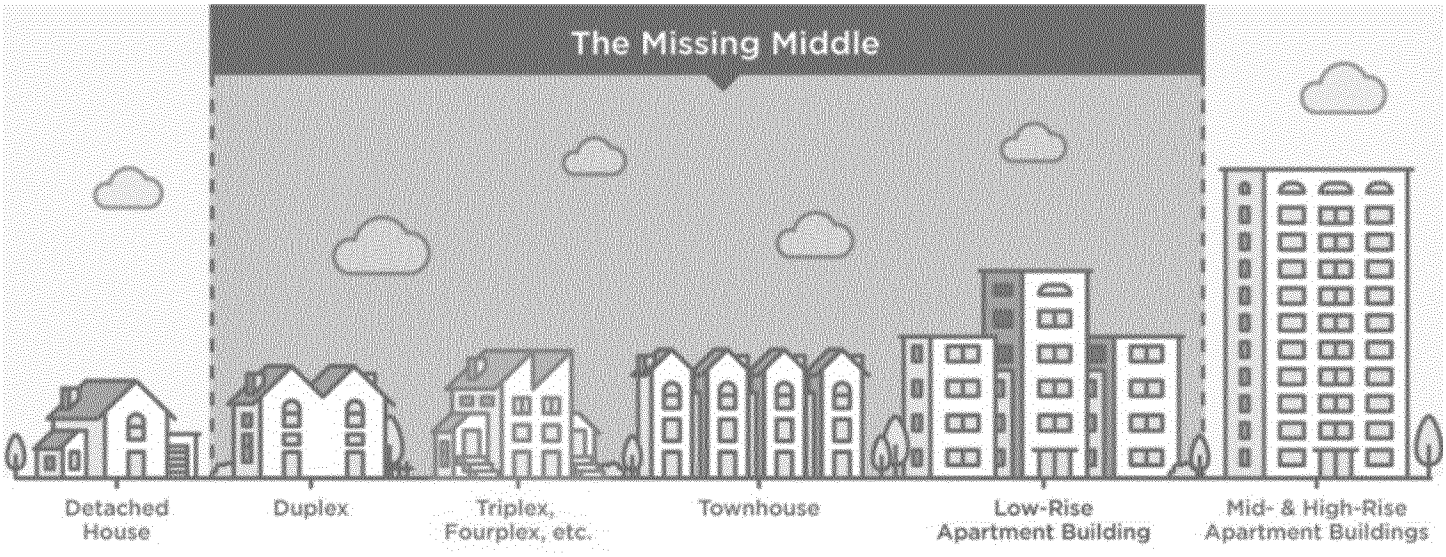
Housing Tenure – Household tenure refers to the way in which an individual or a household occupies their home, such as renting a home or owning a home.

Low-Income Housing Tax Credit (LIHTC) – The Low-Income Housing Tax Credit (LIHTC) program is a program designed to create affordable housing in communities across the United States. The LIHTC gives state and local agencies an annual budget to issue tax credits for the acquisition, rehabilitation, or new construction of rental housing targeted to lower-income households.

Missing Middle Housing - Refers to a range of housing styles between a single family home and high density development. See image below.

Severely Cost Burdened Household – A household is considered "severely cost burdened" when it spends more than 50 percent of its total, pre-tax income on housing (including utility payments).

Very Low-Income Households – A household is considered to be a 'very low-income household' when its total, pre-tax income is less than 50 percent of the community's AMI.



Strategic Housing Plan Overview

The findings of the Housing Needs Assessment and Public Outreach and Engagement, Sections 2 and 3 below, provide insights into Superior's housing issues and needs. The most pressing housing issues include the following:

Affordability: Reduce the cost of housing for households, especially for low-income and cost-burdened households.

Housing Supply: Increase the inventory and variety of housing to meet the diverse needs of Superior households.

Senior Housing: Increase the stock of housing options for aging adults.

Improve Access to Housing: Increase awareness of housing programs and services to residents and form partnerships to close the gap in housing resources.

The strategies included in this plan address multiple objectives of these housing issues and needs. Each strategy is accompanied by a set of actions or implementation tools, along with an estimated timeline, potential partners, income levels served, impact level, and strategy type. While the ranking of these action elements is qualitative, the purpose is to highlight the complex factors that make some strategies require more time and resources than others.

As part of this planning effort, the consultant team conducted a feasibility analysis, included as an appendix. This study informed the recommendations below.

Any strategies listed below that could result in housing development within the Town will be further evaluated during the upcoming Comprehensive Plan to determine the appropriate locations. This should include evaluation of site considerations, intensity of development, compatibility and other location specific elements. This Plan does not propose any specific development.

Additionally, this plan acknowledges that many of these strategies require funding. Over the life of this plan, the Town expects to recieve funding from the 2023 Boulder County Affordable Housing Tax and intends to remain eligible for funds from the State of Colorado through Proposition 123 and other housing programs. Some strategies may require additional funds beyond what these measures can provide. As the State of Colorado and Boulder County develop the distribution plans for these dollars, the Town can better understand the liklihood of anticipated funding amounts.

Section 4 of this Plan contains complete descriptions of the Objectives, Strategies, and Actions.

Housing Strategies & Actions at a Glance

Objective 1: Increase Housing Choices for People

- Remove regulatory barriers to support the production of various housing types, such as missing middle housing, senior housing, multifamily housing, and mixed-use housing.
- Increase opportunities for Accessory Dwelling Unit (ADU) development.
- Promote the development of Missing Middle Housing.

Objective 2: Support & Promote Local and Regional Affordable Housing Efforts

- Support existing and create new partnerships to address affordable housing needs.
- Create an incentive program and pair it with the existing inclusionary housing ordinance to promote the creation of affordable housing.
- Explore local funding or partnerships to reduce the cost of land for affordable housing.
- Explore opportunities to generate revenue for affordable housing development.

Objective 3: Remove Housing Barriers for Those Who Often Encounter Them

- Promote housing choices for seniors.
- Promote housing for people with intellectual and developmental disabilities (IDD).
- Improve access to housing resources.
- Support English Language Learners and BIPOC residents.

2. Summary of the Housing Needs Assesment

A Snapshot of Existing Housing and Demographic Conditions and Needs

The complete Housing Needs Assessment is provided as an appendix.

Who Lives in Superior Today?

The population of Superior is generally younger, and most households consist of families with children.

- Superior's population skews younger; 30% of residents are under age 19, and 29% of residents are between 25 and 44 years old.
- Approximately 40% of households are couples with children, and half of Superior's households consist of three or more persons, indicating that these household characteristics are likely those of families.

Superior's senior population is rapidly growing. This growth is unlikely to slow as Millennials and GenXers grow older.

- Seniors aged 65 years and older experienced the fastest growth since 2011, increasing by 246%, suggesting that Superior is experiencing a substantial aging trend. This could be due to factors such as access to health care, an attractive environment for retirees, families aging in place, or an influx of older adults seeking a peaceful lifestyle.
- Millennials and Gen Xers represent about 57% of Superior's population. As this population ages, Superior's senior population will continue to grow.

Renter households are typically smaller in size (1 and 2-person households) and generally live in apartments.

- About 62% of renter-occupied housing in Superior is occupied by households with one to two persons.
- Owner-occupied housing is generally occupied by families with three or more persons.

Superior is an affluent community where households have one of the highest median household incomes in the county.

- In 2021, Superior had a median household income of $131,000 — the second-highest median household income when compared to the following comparison cities of Erie, Lafayette, Louisville, Longmont, and Boulder.
- Incomes for owner households are generally higher than renter households.

Superior's population has grown to be more racially and ethnically diverse.

- While the majority (70%) of Superior's population identifies as White, the number of racial and ethnic groups has increased since 2011. The Asian population is the second-largest racial group (17%), followed by the Hispanic population (9%).
- The Black or African American population was the only racial group that experienced a decrease since 2011.

What are the Current Housing Conditions in Superior?

The majority of superior's housing stock is single-family detached—with a limited diversity of housing types.

- The majority (60%) of housing inventory in Superior is single-family detached. Superior primarily built single-family homes throughout the 2000s and 2010s. Only starting in 2020 did multifamily building permits outnumber single-family permits.

The Marshall Fire has further exacerbated the lack of available housing in Superior. While demand for housing is high, overall housing vacancy is very low.

- The Marshall Fire of 2021 destroyed 390 residential properties (approximately 8% ot the Town's housing units) and 4 commercial properties.
- Superior had a housing vacancy of 2.5% in 2021, one of the lowest among Erie, Lafayette, Louisville, Longmont, and Boulder. For comparison, Boulder County had a housing vacancy rate of 5.9% in 2021.

Homeownership rates have fallen in Superior as increasing numbers of households tend to rent.

- In Superior, homeownership rates have decreased 10% since 2010, while homeownership rates remained stable in Boulder County and Colorado.
- The share of Superior households who rent increased from 30% in 2011 to 40% in 2021. This underscores the significance of having rental housing that is both of good quality and reasonably priced, and increasing opportunities for home ownership in the Town.

Incomes have not kept pace with rising housing costs, and housing attainability in Superior has become challenging for many residents.

- While a household earning 100 percent of the area median income ($144,100 is AMI for a family of four in Boulder County in 2023) can afford the average rent, they cannot afford to purchase a home at the median price ($724,300). A Superior household would need to make $181,000 or more to afford a median-priced home in 2023. This suggests that higher-income households likely have a better chance of homeownership while lower and median-income households might be limited to renting.
- The inability of a moderate-income household to afford the median-priced home raises questions about the potential barriers to homeownership in Superior. Factors like high down payment requirements, stricter mortgage lending criteria, and rising home prices relative to income growth can make it difficult for many households to enter the homeownership market.
- In 2021, about 40% of renter households in Superior were considered cost burdened.

What Types of Housing Will Future Residents Need?

Superior needs a diversity of housing types to support the needs of its existing residents and those who are employed in superior but can't afford to live here. Increasing the supply of both renter and ownership housing units is important for Superior.

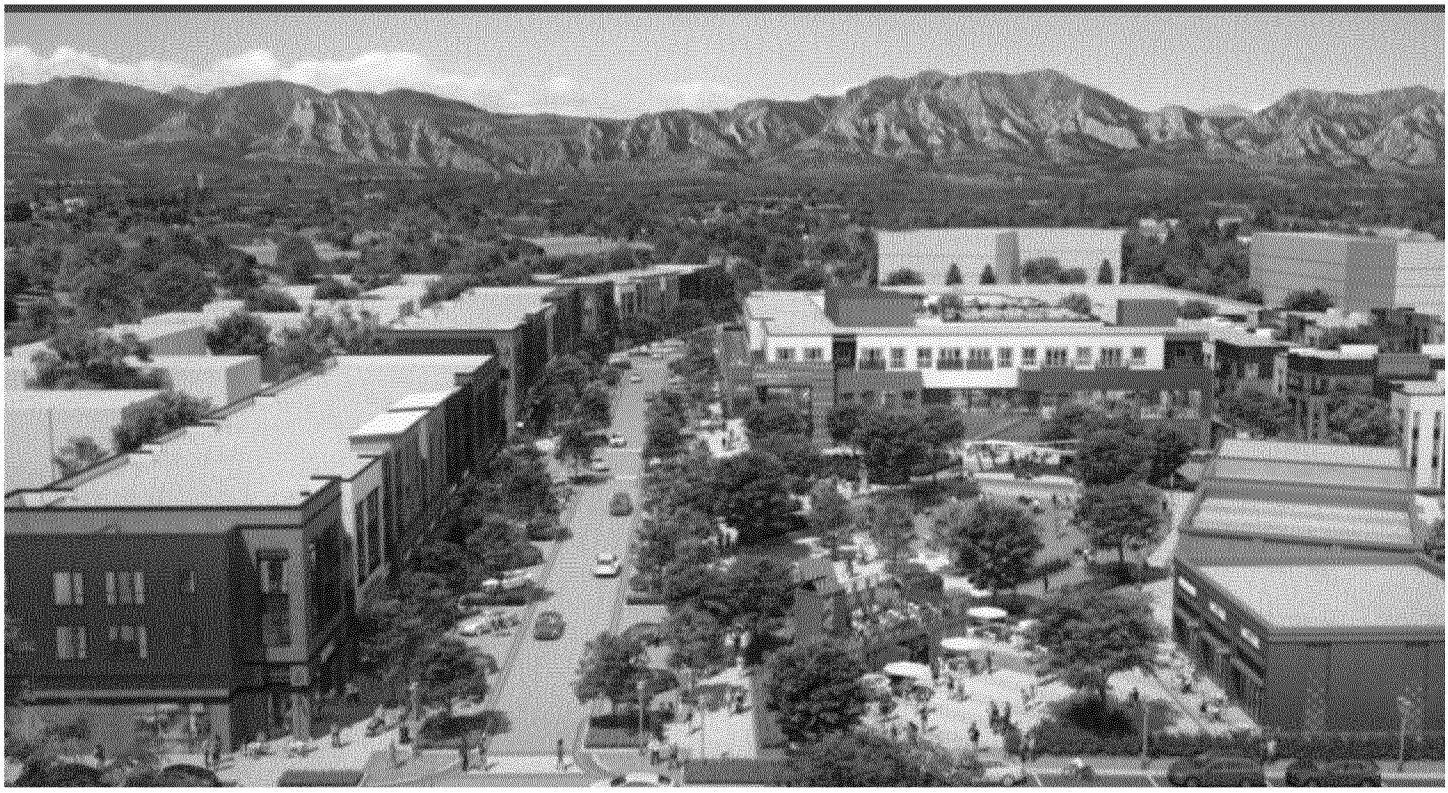
- If the demand for housing, particularly for homeownership, exceeds the available supply, it can drive up home prices and make it challenging for households with moderate incomes to purchase a home. Similarly, if the demand for rental housing exceeds the available supply, it can drive up rent prices and price out households that rent in Superior.
- Downtown Superior, a key growth area, has added several hundred housing units of diverse housing types. These newly built housing units can help meet some of the town's housing needs; however, Superior should continue looking for strategic locations for infill development.

As Superior's population ages, there will be a growing need for housing to accommodate this demographic group.

- Superior's aging population will need housing that meets various household needs, such as wanting to downsize, aging in place, or multigenerational living.
- Increasing property tax valuations have led to large increases in property tax, impacting the ability of households with fixed incomes to remain in their homes.

Superior will have more middle-aged millennials wanting to enter the homeownership market.

- As they age, more Millennials are likely to desire to own their homes. As a result, there will be an increased demand for starter homes and relatively affordable types of ownership and rental housing.
- Additionally, to accommodate the housing needs of this population group, there will need to be more one- and two-bedroom housing units and housing options near major employment centers and services.



3. Public Outreach and Engagement

The Strategic Housing Plan was developed between May 2023 and July 2024. The community engagement process for the Plan involved a series of interactive and online activities aimed at gathering input from residents.

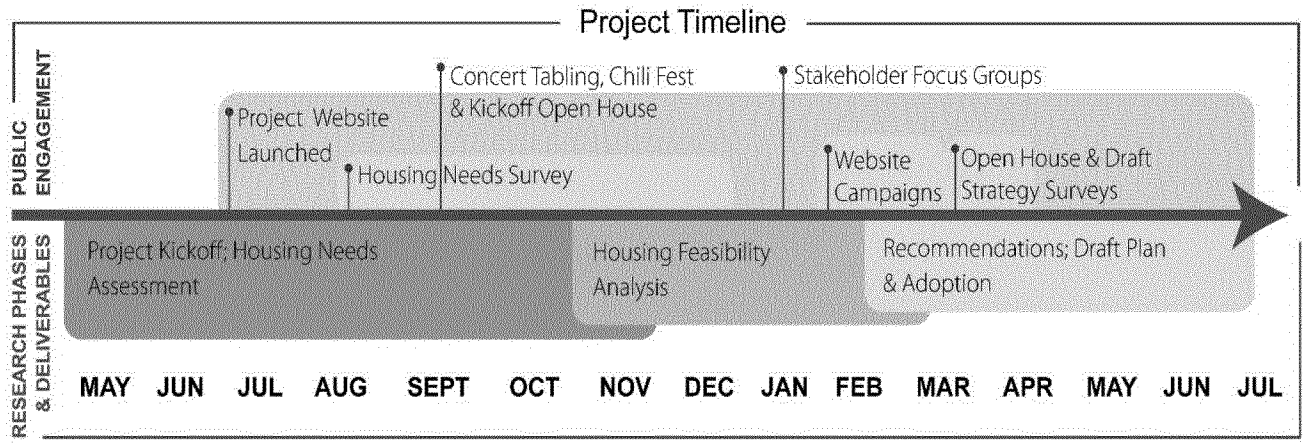
Events like open houses and community festivals provided forums for face-to-face discussions, while focus groups helped address specific concerns of vulnerable populations such as seniors and people with disabilities. Online surveys and a dedicated website allowed for broader community participation, ensuring that even those unable to attend in-person events could have their voices heard.

Additionally, social media played a role in keeping the community updated and engaged throughout the process. This comprehensive approach helped capture a wide range of opinions and suggestions, aiding in the development of a well-rounded housing plan.

What Public Engagement Activities Were Conducted?

- **3 Open Houses**
- **4 Stakeholder Interview Events**
- **2 Booths at Community Events**
- **7 Online Surveys and Engagement Prompts**
- **1 Project website on ShapeSuperior.com**

APPROXIMATELY 200 PEOPLE PARTICIPATED AT IN-PERSON EVENTS AND THE TOWN RECEIVED MORE THAN 1,340 SURVEY RESPONSES THROUGHOUT THE PROJECT.





What Housing Issues Are on the Top of Superior Residents' Minds?

The following key findings elevated by residents highlight a mix of challenges related to affordability, diversity of housing options, and maintaining the quality of life as the town grows and changes.

- Superior residents care most about aging in place, affordable homeownership, preserving community character in the face of development pressure, and Superior as a "complete community " with amenities and activities.
- Many Superior residents recognize that there is a need for housing that is affordable to low-income households.
- Superior residents identify costs, overall supply, and availability of options as the greatest housing challenges in the community.
- Stakeholders identified a need for supportive, affordable, and mixed income communities to support seniors and residents with disabilities.
- Stakeholders identified community misunderstanding and opposition, cost, market variability, and funding limitations as key barriers to supportive and affordable housing provision.
- Superior residents expressed a strong preference for traditional single-family homes occupied by the owner(s), but also indicated robust and varied interest in other housing options.

> "By building more (affordable) housing you're essentially reducing the cost of existing homeowners equity"

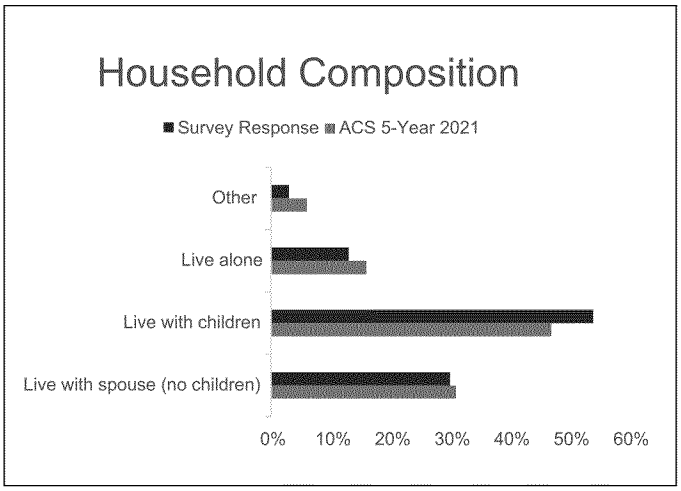
- Superior residents expressed mixed support and opposition for draft housing strategies, with more support for strategies that reduce housing barriers (Objective 3), and least support for strategies that support affordable housing efforts (Objective 2).
- Stakeholders recommended a variety of potential strategies and resources to promote and allow for housing that supports community members who are most vulnerable.

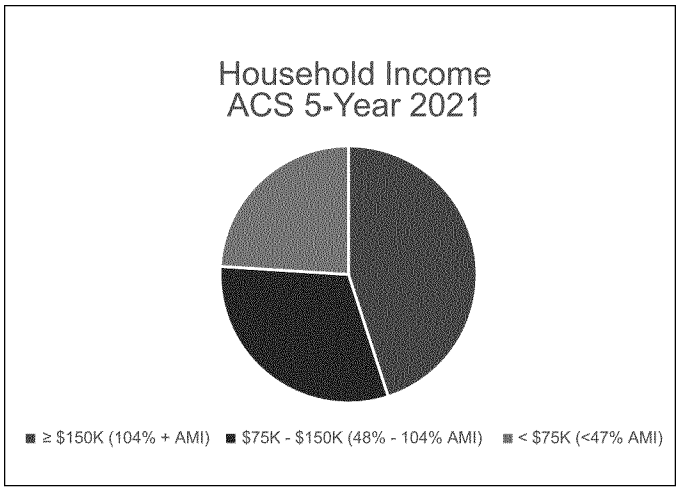
> "We need to find ways to increase housing supply and provide affordable housing so we can be an inclusive community."

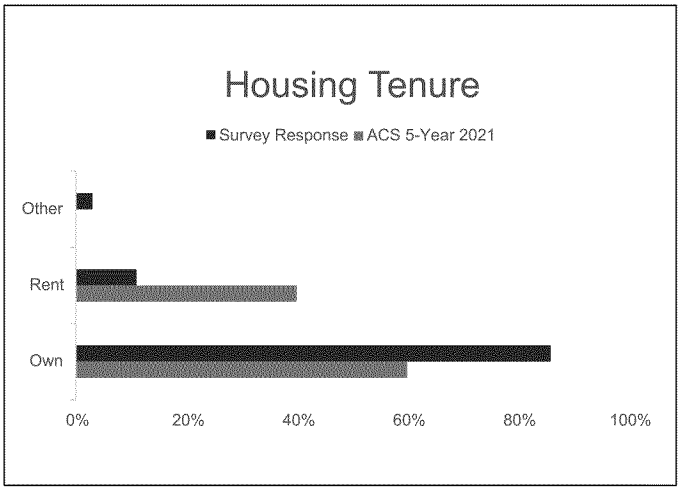
Engagement Outcomes

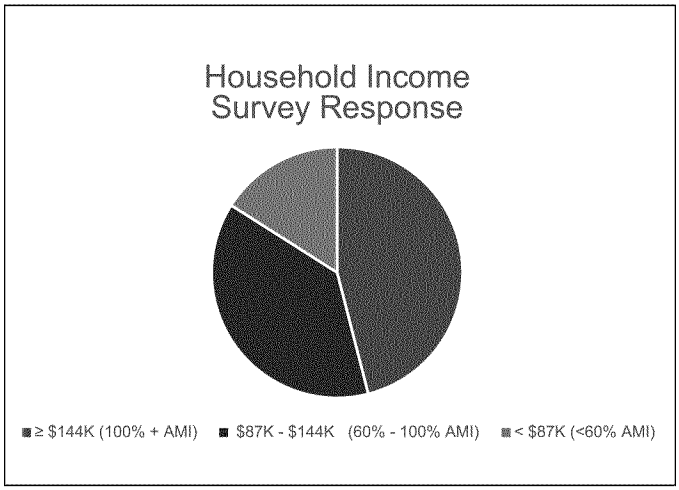
By comparing self-reported survey responses to data obtained for the Housing Needs Assessment, the Town has a measure for evaluating the effectiveness of our outreach campaign. The survey data used below comes from respondents who indicated that they are current residents of Superior (96%). Judging by this comparison, the engagement efforts were fairly sussessful at reaching most segements of the population, though residents who live alone, rent apartments, have lower incomes, and are more housing cost burdened remain underrepresented.

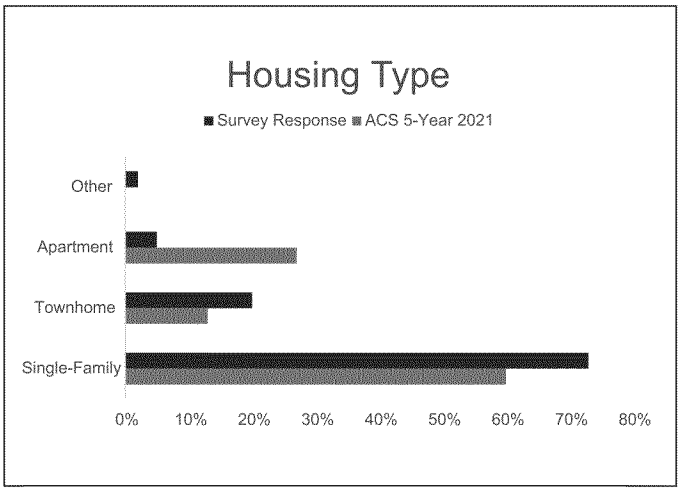
Comparisons of Housing Needs Assessment and Survey Responses

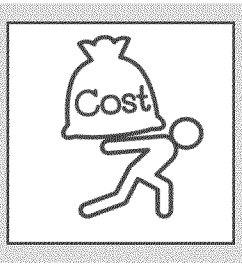
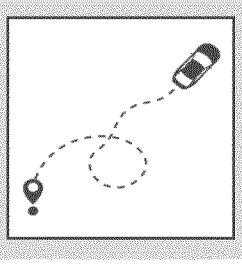










Percentage of residents that report they are cost burdened	Survey responses: 29% *2021 ACS 5-Year: 40%*	
Percentage that report that transportation costs negatively impact housing choices	Survey responses: 18% *Average Local Annual Transportation Cost: $14,589*	
Likelihood of moving in the future	Planning to relocate in the next 5 years: 42% Hoping to remain in Superior: 75%	
Overall satisfaction with housing choices in Superior	Survey responses: 56% are satisfied *44% are unsatisfied*	

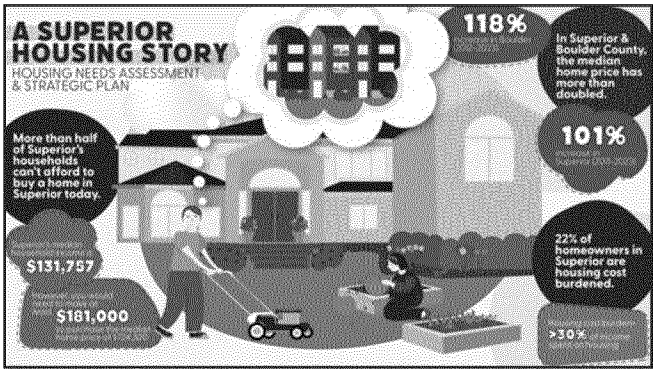
How was this input used?

- Understand housing needs and preferences.
- Provide insights into what key barriers need to be addressed.
- Inform strategy objectives.
- Collect input on future housing vision.
- Shape specific strategies and implementation actions.
- Prioritize strategies and actions.

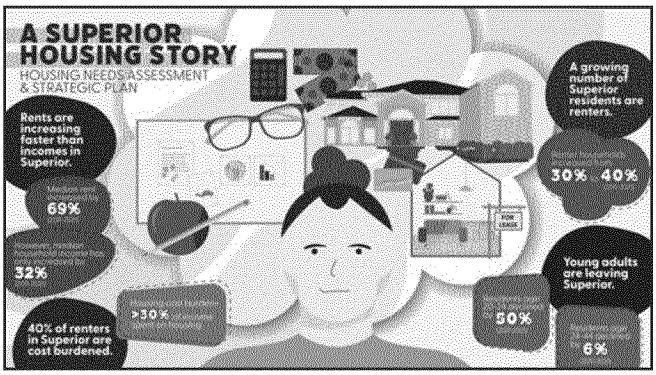
"I hope to see a mix of permanently affordable homes to own, subsidized rental units, as well as attainable middle income housing built in Superior. All housing needs to be in close proximity to public transportation and amenities."

Beyond the Numbers

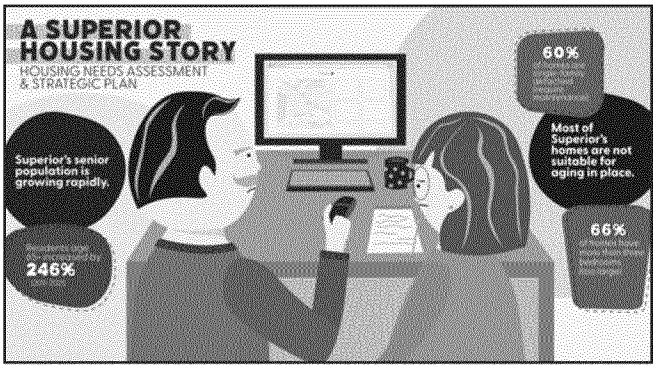
The Town of Superior's Housing Needs Assessment got staff musing on a little ditty about longtime Superior residents Jack and Diane. The following stories were shared for idea generation with Town residents.



The story was intended to be relatable and to humanize the facts and figures uncovered by the housing data.



Jack and Diane are a middle aged couple who, like so many other Superior residents, have good jobs with salaries that have failed to keep up with up housing costs, young adult child who they would like to help get a good start in life by supporting their education, and aging parents to whom they both want and need to live in closer proximity.



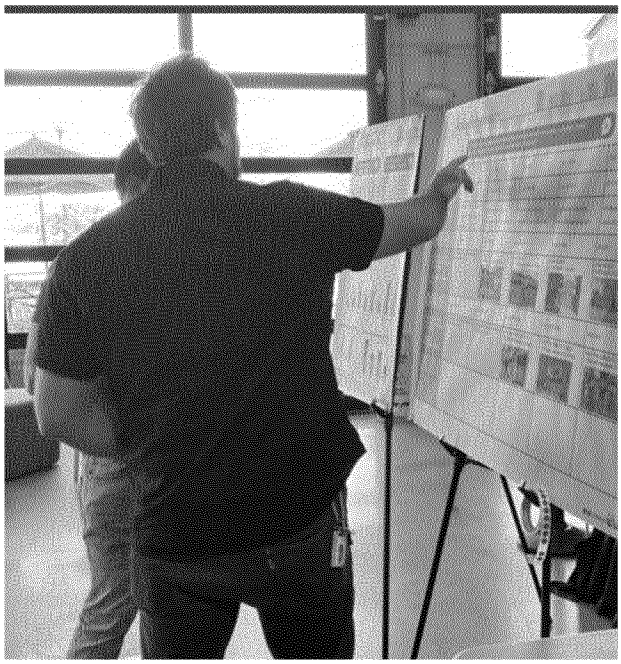
"It's unfortunate that living in Boulder County is becoming increasingly expensive. Sadly, I advise figuring out a way to make more money, move to a less expensive town, or find a small home that costs less."

"Sell and downsize perhaps in another municipality with more reasonably priced homes."

"Move. You'll never be able to afford to downsize in Superior without having to pay substantially more, which is the unfortunate situation many of us with kids in college or finishing college are discovering. It's very unfortunate that our town is pricing us out."

"Be a voice and advocate for your needs."

"Stay where you are, even though you have good equity there are no smaller ranch houses under a million in Superior, except for the tiny homes which are too small and ridiculously priced in the 600,000."



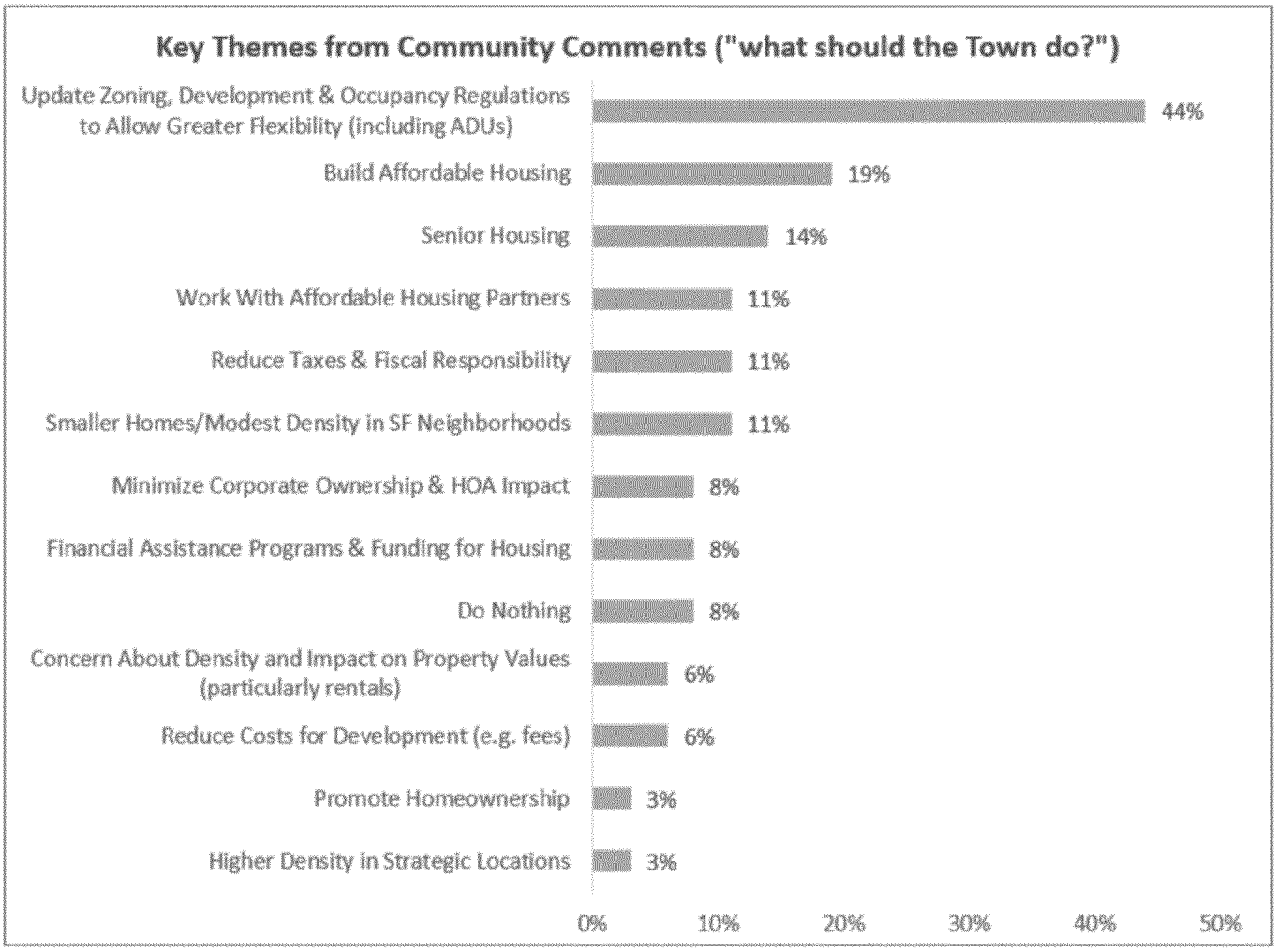
Potential Solutions & Strategies

Approaches & Potential Solutions Identified by the Community

Open-ended responses resulted in 13 key themes related to outcomes, approaches, and strategies related to housing in Superior. Those that rose to the top include updates to regulations (such as zoning, development code, etc.) to allow for more flexibility around what's permitted in the housing market and efforts to build affordable housing.

Draft Strategy Prioritization

In general, participants were more supportive of strategies to support reduce housing barriers (Objective 3), and less supportive of strategies to support affordable housing efforts (Objective 2). Support for strategies related to providing more housing choice overall was mixed.



4. Implementing the Strategic Housing Plan

The complete descriptions of each Objective, Strategy and Action are provided in this section, along with the guiding principles of the Strategic Housing Plan. Each action includes the information in the table below to help understand implementation timline, type of action, potential partners, the level of effort required for implementation, the income level served, and the type of strategy type; Programmatic, Housing Production, Partnership, Funding and/or Regulatory.

Timeline:	Short-term (1-2 years), Mid-term (3-5 years), Long-term (5+ years)
Action:	What level of time commitment is needed. One-time or On-going.
Partners:	What partners might be needed to support implementation.
Level of Effort	The level of staff time, resources, and potential funding to implement the action: Low, Moderate, High.
Income Level Served:	The income-level that this action will serve.
Impact Level:	What is the likely impact of this action: Low, Medium, and High.
Strategy Type:	 Programmatic  Housing Production  Partnership  Funding  Regulatory

Strategic Housing Plan Principles: A Guide to Decision-Making



These "rules of the road" offer guidance for decision making to maintain clarity as the Town pursues its housing goals. Whether the Town of Superior's approach to housing is ultimately opportunistic and flexible or targeted and rigid, these tools can operate inside a set of high level principles that reflect both the community's values and aspirations, as well as its economic, political, and fiscal realities.

Be action-oriented and embrace incremental progress

Housing markets are complex, powerful, and difficult to affect. This can appear daunting to those who seek different market outcomes. But the Town of Superior is a forward-thinking and creative local government with a history of getting things done. There are action items in the following strategies that the Town can begin working on quickly, with demonstrable results to follow. Superior should have no hesitation about getting started right away, and beginning the process of stacking up small but important wins that add up over time.

Aim for mixed-income outcomes

Just as housing monocultures run counter to the need for flexibility for individual households and the community over time, so too do income monocultures. A focus on increasing affordability townwide will help to maintain income diversity as Superior considers the few remaining parcels in Town and redevelopment of underutilized areas in the upcoming Comprehensive Plan. Mixed-income housing development should be front of mind when planning for housing in the future.

Pursue geographic dispersion

No part of the community should be "off limits" to new housing or affordable housing. Each neighborhood should have opportunities for the location of new and affordable housing. This is not to say that every opportunity will be the same, or that a project that is the right fit for one location could easily be relocated somewhere else. But if housing affordability is a townwide challenge, then every part of the Town has some role to play in helping to address it.



Get the right project in the right place

Affordability is a critical consideration for newly built housing, but it is not the only consideration that matters. Superior is a community with a well-established existing planning context, and new housing, if not properly designed for its site, block, street, or neighborhood, may fail to contribute positively to the town. Simply being affordable may not be enought to outweigh a poorly planned site, inappropriate architecture, or a shoddily constructed building. The town's planning system, from the comprehensive plan to the land use code, should set rules within which any housing developer, including affordable housing developers, must operate.

Support other affordable housing developers when possible and lead when necessary

Housing development, especially affordable housing development, is a difficult and financially complex undertaking. The Town cannot provide housing directly, but there are existing organizations that are expert in housing development, and are able and willing to build affordable housing in Superior. The Town may consider a number of tools to increase affordable housing that no other entity can achieve such as land use designations and development regulations including zoning and allocation of meaningful financial resources to fill financing gaps.

Act regionally

Although the town has an affordablity challenge, it is not Superior's alone. It is a regional phenomemom across the entire Denver and Boulder area. Superior should show leadership by implementing this Plan and the Town should also stand ready to collaborate with other regional actors, from neighborhing jurisdictions to the Regional Housing Partnership, as opportunities present themselves.

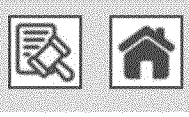
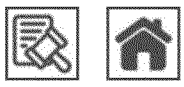
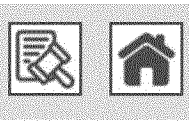
Objective 1

Increase Housing Choices for People

Several market factors have contributed to Superior's housing unaffordability. These include limited housing availability due to geography constraints, strict zoning rules, laws related to construction defects, and public approval processes, combined with high demand from population growth, all of which drive up prices. Land use policies that limit housing types and density can often exacerbate the problem and limit housing mobility for households to downsize or purchase their first starter home. High construction costs, including land, materials, and labor, along with changes in loan interest rates, also play a role in making housing less affordable. To tackle these issues and ensure that all residents can remain in the community as their housing needs change, Superior should consider implementing strategies that focus on making it easier to build more varied types of homes and creating more affordable housing.

STRATEGY
1.1 Remove regulatory barriers to support the production of various housing types, including missing middle housing, senior housing, multifamily housing, and mixed-use housing.

While the Town of Superior does not directly produce or control housing, the town's land use policies, development code, infrastructure investments, and programs influence the housing market as well as what types of housing get built. These same policies and regulations often act as barriers to the viability and financial performance of housing. Amending and/or removing regulatory barriers can yield great benefits, such as making certain housing types viable, producing more housing, and potentially lowering housing costs to build and to the end consumer.

Action 1.1.1	Explore reductions in minimum parking requirements for desired housing types	
Action 1.1.2	Establish clear and objective development standards and approval processes for desired housing.	
Action 1.1.3	Develop pre-approved housing plan sets for ADUs and missing middle housing types	

THE DETAILS

1.1.1. Explore reductions in minimum parking requirements for desired housing types.

Reducing parking requirements for residential housing projects can lower construction costs, increase the efficiency of land use, and promote more sustainable urban environments. Removing regulatory barriers that act as financial hurdles is one of the policy tools that Superior has at its disposal to promote the production of a variety of housing types.

Cities and towns can take different approaches to structuring parking requirements. For example, jurisdictions may choose to apply parking reductions based on the location of the housing, with lower parking requirements more common in areas closer to transit stations or frequent bus service. In some locations, increasing allowances for the use of on-street parking may also be considered.

Timeline:	Short-term
Action:	One-time
Partners:	N/A
Level of Effort	Moderate
Income Level Served:	All Income Levels
Impact Level:	High
Strategy Type:	Housing Production, Regulatory

1.1.2. Establish clear and objective development standards and approval processes for desired housing.

Establishing clear and objective development standards can help create a transparent and predictable process for building new housing by reducing uncertainties and often lowering project costs. For the Town, these standards can simplify the approval process, requiring less staff time and resources, as well as ensure that new developments meet community needs and housing goals. The Town of Superior can implement such improvements to new infill or/greenfield neighborhoods providing higher-quality housing that adheres to consistent standards.

Following establishment of clear and objective standards, some communities take a further step to ensure predictability by removing requirements for public hearings. This allows developers to meet the stated goals and standards of the Town, while removing the uncertainty that occurs with public review. Alternatively, applications that meet standards could be placed on a "fast-track" review to ensure public hearings happen quickly.

Timeline:	Mid-term
Action:	One-time
Partners:	N/A
Level of Effort	Moderate
Income Level Served:	All Income Levels
Impact Level:	Medium
Strategy Type:	Housing Production, Regulatory

1.1.3. Develop pre-approved housing plan sets for ADUs and missing middle housing types

Developing pre-approved plan sets facilitates and expedites the construction of desired housing types. Pre-approved plans reduce the costs of designing new homes and streamline the permitting of missing middle housing.

Several benefits of pre-approved housing plans include:

- Increased awareness of missing middle housing types, allowing the community to become more familiar with duplexes, cottage housing, and small-scale apartments.
- Reduces overall project costs and shortens timeframe for project.
- Promote higher-quality design, while making it easier for to build them.
- Promote a set of building designs that fit well within the community context, and which reduces regulatory friction in obtaining permit approvals.

Timeline:	Long-term
Action:	One-time
Partners:	N/A
Level of Effort	High
Income Level Served:	All Income Levels
Impact Level:	Medium
Strategy Type:	Housing Production, Regulatory

Case Study: Portland Land Use Review

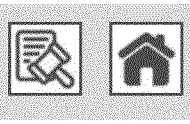
The City of Portland's permit review process is innovative in the way that they tier their review process based on the scale and type of development proposed. The city has five different types of land use reviews.

These include: Type I, Type II, Type IIx, Type III, and Type IV

Each one varies in the type of review from simple review procedures required for historic properties, to demolitions, and more complex reviews that required for land divisions or multi-story development project. Each review type clearly states procedural requirements, public notice timeline, hearing timeline, and when approval decision would be made. These clear review procedures give developers insights into what is needed for their development but also clear timelines for when they can expect a review to be completed.

STRATEGY
1.2. Increase opportunities for Accessory Dwelling Unit (ADU) development.

Allowing Accessory Dwelling Units (ADUs) to be built on single-family lots or within existing single-family homes can modestly increase housing density town-wide. ADUs offer flexible living solutions that can adapt to changing family needs. They can serve as a home for aging parents facilitating multigenerational living, a starter apartment for adult children, or a separate space for guests. Additionally, ADUs can generate passive income if rented out, providing economic benefits to homeowners.children reside on the property.

Action 1.2.1	Explore allowing ADUs town-wide.	
Action 1.2.2	Review and clarify ADU development standards to make it easier to develop ADUs.	
Action 1.2.3	Explore incentives for ADUs and tie them to affordability, such as deed restrictions	

THE DETAILS

1.2.1. Explore allowing ADU's town-wide.

While some ADUs have been built in Superior, this housing type is only allowed in a small geographic area in Original Town. Allowing ADUs town-wide can help advance the goals of the housing plan. There are several ways to encourage the development of ADUs, including zoning changes to remove development barriers as well as offering financial incentives.

Beyond allowing ADUs town-wide, the Town can facilitate the construction of ADUs for residents by implementing the following actions:

- Offer dedicated technical assistance for the development of ADUs
- Promote and participate in ADU tours.
- Develop pre-approved ADU permit plans to streamline the review process and reduce cost.

Timeline:	Short-term
Action:	One-time
Partners:	HOAs
Level of Effort	Moderate
Income Level Served:	All Income Levels
Impact Level:	Medium
Strategy Type:	Housing Production, Regulatory

1.2.2. Review and clarify ADU development standards to make it easier to develop ADUs

Key themes emerged from the community engagement process and development feasibility analysis such as a need to clarify ADU development standards and removing building regulatory code barriers to make it easier to build ADUs within existing single-family homes. This also includes simplifying the building code for residents wanting to create internal ADUs. The Town can promote the construction of ADUs by implementing the following actions:

- Clarify and simplify ADU development standards within the municipal code.
- Create materials to help guide the building permit process.
- Amend code to remove ADU parking requirements.
- Develop strategy to bring existing ADUs into compliance.
- Partner with housing builder organizations and State of Colorado to support minimal building requirements for internal/attached ADU's such as fire wall separation, separate entrance from primary dwelling unit, and separate HVAC system.

Timeline:	Mid-term
Action:	One-time
Partners:	ADU developers and home builders
Level of Effort	Moderate
Income Level Served:	All Income Levels
Impact Level:	Medium
Strategy Type:	Housing Production, Regulatory

1.2.3. Explore incentives for ADUs and tie them to affordability requirements such as deed restrictions.

Development incentives are powerful tools used to encourage desired housing types by helping offset the costs of construction. Since ADUs will are typically built by homeowners of single-family homes, there exist only a limited number of ways to fund the construction of an ADU. Homeowners will either have to fund the ADU construction through cash savings or obtain a loan from a bank. Superior can help offset the costs of ADU construction by waiving or subsidizing permitting fees, or by providing loans or funding assistance. While some jurisdictions do not place affordability requirements in exchange for financial help, many jurisdictions do enact some type of affordability requirement and deed restriction to the ADU property in exchange for financial assistance.

Timeline:	Mid/Long-term
Action:	One-time
Partners:	Homeowners
Level of Effort	High
Income Level Served:	80% AMI and below
Impact Level:	High
Strategy Type:	Housing Production, Regulatory

Case Study: Napa County Affordable ADU Loan Program

In 2022, Napa County launched the Affordable ADU Loan Program, funded initially with $5 million from ARPA funds, to promote affordable housing through the development of Accessory Dwelling Units (ADUs). The program offers forgivable loans ranging from $25,000 to $105,000 to homeowners willing to build ADUs and maintain rent levels affordable to households earning up to 80% of the Area Median Income (AMI) for five years. The loan amounts are calculated based on the projected difference between market and affordable rents over this period, effectively making these loans the capitalized value of a five-year rental subsidy.

The program witnessed substantial interest upon its launch in February 2023, quickly utilizing the available funds with hundreds of homeowners applying. Future funding rounds will tap into hotel tax revenues, allowing the program to continue supporting the construction of ADUs at a smaller scale compared to traditional multiunit projects.

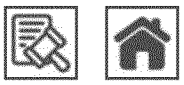
Case Study: West Denver Single Family Plus Program

The Accessory Dwelling Unit (ADU) program in West Denver, developed in partnership with Habitat for Humanity and local nonprofits, aims to assist homeowners, particularly those with low to moderate incomes, in constructing affordable ADU's on their properties as a way to supplement their income and minimize potential displacement. The program significantly reduces construction costs from around $200,000 to between $100,000 and $140,000, partly by using pre-approved designs. It also offers financial support through forgivable loans of $25,000 and covers initial costs like soil testing, which can be incorporated into a mortgage. Additionally, the city's loans are forgivable over 25 years, and housing counselors provide necessary guidance, ensuring the financial feasibility for participants.

STRATEGY

1.3. Promote the development of Missing Middle Housing

To respond to the need for affordable housing, several housing types can be encouraged in multiple forms, densities, sizes, and locations. Through land use changes, the Town of Superior can encourage a diversity of housing types such as cottage housing, duplex, triplex, and other missing middle housing types that can moderately increase housing density and housing units.

Action 1.3.1	Consider allowing moderate density increases in single-family zones to allow for duplexes and triplexes.	
Action 1.3.2	Identify locations for small-lot zoning and smaller housing units.	

THE DETAILS

1.3.1. Consider allowing moderate density increases in single-family zones to allow for duplexes and triplexes.

Superior's housing is fairly homogenous, where 60 percent of the housing stock is single-family detached homes. Building a wider range of housing options is one way to support broader affordability within the Town of Superior. Moderately increasing density in single-family zones can increase the number of units that can be built on a lot, creating an efficient use of land and economies of scale. Generally, per unit construction cost is lower for duplexes and triplexes compared to single-family homes, mostly due to shared building components like roofs and foundations, which spreads out costs and can lower prices for buyers and renters, reducing the overall housing costs burden within Superior.

Superior could evaluate modest density increases across single-family zones with the upcoming Comprehensive Plan to support a greater number of housing units to be built.

Additional actions the Town should consider as part of the Comprehensive Plan include:

- Clearly define each missing middle housing type, including explicit standards for building scale, unit count, configuration/form, or any combination of these parameters
- Seek out best practice guidance around parking, regulating intensity, and where to allow missing middle housing, to ensure its implementation is rooted in feasibility and equity.

Timeline:	Long-term
Action:	One-time
Partners:	N/A
Level of Effort	High
Income Level Served:	All Income Levels
Impact Level:	High
Strategy Type:	Housing Production, Regulatory

1.3.2. Identify locations for small-lot zoning and smaller housing units.

Superior has limited vacant land remaining to develop. Small lot zoning allows single-family homes and other smaller dwelling units (e.g., ADUs) and duplexes to be built on lots smaller than those typically allowed in single-family zone districts. Development on these small lots can be permitted by ordinances that reduce or relax minimum lot size, setbacks, or lot coverage requirements.

Small lot zoning is most effective in developed residential zones with fragmented lots, where, under present land use regulations, additional housing units would not be allowed. It can also be applied effectively in areas below maximum density where large or adjacent lots could be subdivided to create denser development.

As part of the Comprehensive Plan update, Superior should consider evaluating residential areas that could support higher-density housing and allow for greater housing options. Small lot zoning is often created and applied to focused areas through individual ordinances or amendments to existing codes or Planned Developments.

Timeline:	Long-term
Action:	One-time
Partners:	N/A
Level of Effort	Moderate
Income Level Served:	All Income Levels
Impact Level:	High
Strategy Type:	Housing Production, Regulatory

Objective 2

Support and Promote Local and Regional Affordable Housing Efforts

Currently, the Town lacks permanently affordable rental properties and homes with deed restrictions for affordability. While the Town has passed an inclusionary housing ordinance that requires new residential developments of 10 units or more to set aside a certain percentage as affordable, the Town has not yet seen any new affordable housing units. It is crucial for Superior to considerably expand its supply of affordable housing choices to meet the needs of households with low and moderate incomes

Affordable Housing Efforts To-Date:

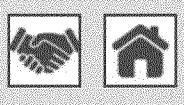
In 2018, the Town of Superior committed to the county-wide goal of 12% of housing stock being affordable by 2035. In Superior, this is roughly 575 housing units.

Inclusionary Housing Ordinance: In 2020, the Town adopted an IHO that requires 15% of units be affordable within new developments containing 10 or more homes.

Proposition 123: The Town intends to remain eligible for Prop 123, which requires construction of 22 affordable units by 2027.

STRATEGY
2.1 Support existing and create new partnerships to address affordable housing needs

While the Town of Superior relies on the support from regional partners such as the Boulder Housing Authority, Habitat for Humanity, or private affordable housing developers to build affordable renter and ownership housing, these relationships can be deepened, and new partnerships can be built with other housing providers and builders to facilitate and encourage the development of affordable housing in Superior. These partnerships can be instrumental in supporting the production of affordable housing.

Action 2.1.1	Partner with organizations such as Habitat for Humanity and Boulder County Housing Authority to support the creation of affordable homes	

THE DETAILS

2.1.1. Partner with organizations such as Habitat for Humanity and Boulder County Housing Authority to support the creation of affordable homes.

The Town of Superior has ongoing partnerships with Boulder County Housing Authority and can make new partnerships with Habitat for Humanity to support their mission of building affordable homeownership units in Superior.

While the Town of Superior does not build housing itself, partnerships with local nonprofit housing providers and builders can substantially increase the likelihood of affordable homeownership housing getting built. These partnerships allow towns and cities to leverage the nonprofits' expertise in affordable housing development and access to diverse funding sources. Nonprofits bring strong community ties that facilitate public engagement and trust, ensuring projects are well-received and meet specific local needs.

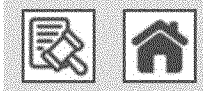
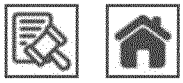
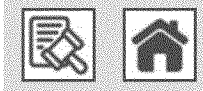
These ongoing partnerships are also beneficial to nonprofits as they allow for direct dialogue with town staff to help overcome potential development barriers and address them with code amendments or modifications to get the housing projects built.

As part of the Town's inclusionary housing program, the town can also consider partnering with these nonprofit housing providers and builders to help administer eligibility requirements and ensure that the for-sale housing units remain affordable to future generations.

Timeline:	Mid-term
Action:	Ongoing
Partners:	BCHA, Habitat for Humanity
Level of Effort	Moderate
Income Level Served:	120% AMI and below
Impact Level:	High
Strategy Type:	Housing Production, Partnerships

STRATEGY
2.2. Create an incentive program and pair it with the existing Inclusionary Housing Ordinance to promote the creation of affordable housing.

Explore developing an incentive program to encourage the development of affordable housing. Incentives may include land development, regulatory, or financial incentives.

Action 2.2.1	Incentivize affordable housing development through density and height bonuses and parking and landscape reductions.	
Action 2.2.2	Expeditie review processes for affordable housing projects.	
Action 2.2.3	Subsidize or reduce fees for affordable housing projects.	

THE DETAILS

2.2.1. Incentivize affordable housing development through density and height bonuses and parking and landscape reductions.

Some communities realize additional affordable housing through approval of density and/or height bonuses, or offer exceptions from development standards such as minimum landscape or parking requirements. Density and height incentives can be utilized to increase the number of affordable units beyond the minimum standards or help offset some of the cost. Additionally, in some instances, incentives can be utilized to make building affordable units on-site more economically attractive than paying the fee-in-lieu.

The Town of Superior can pair a list of incentives with mandatory requirements to promote the construction of affordable units on-site and use enhanced incentives to increase the supply of both market-rate and affordable housing.

As noted in strategies within Objective 1 above, parking requirements that have been set too high can create several problems, including increased development costs and challenges to utilizing smaller sites for infill development or providing other services and amenities on-site. Beyond height, density, parking and landscaping, other development standards may be appropriate for relief including lot coverage, lot size, setback, etc. These considerations are particularly important for affordable housing developers.

Timeline:	Mid-term
Action:	One-time
Partners:	BCHA, other housing developrs
Level of Effort	High
Income Level Served:	80% AMI and below
Impact Level:	High
Strategy Type:	Housing Production, Regulatory

2.2.2. Expedite review processes for affordable housing projects.

Expedited permitting and review processes can help increase the supply of housing and reduce development costs as a project moves from design and engineering to construction. Expedited reviews typically allow qualifying affordable housing projects (which can sometimes include the conversion of some underused commercial properties into affordable housing) to be processed faster to help minimize project delays and unexpected costs.

Overall, expedited permitting and review policies help increase the supply of homes and apartments that are affordable to families by expediting and simplifying the permitting and review process.

Expedited reviews look different across many communities and can include some or all of the following:

- Allowing affordable housing projects that meet the Town's development code and design standards to be approved administratively;
- Fast-tracking affordable housing project applications through the review process, and prioritizing affordable housing applications over other applications;
- Assigning a Town staff member as a project advocate/expediter to help resolve development code issues that come up during project review.

Timeline:	Mid-term
Action:	One-time
Partners:	BCHA, other housing developers
Level of Effort	High
Income Level Served:	80% AMI and below
Impact Level:	High
Strategy Type:	Housing Production, Regulatory

2.2.3. Subsidize or reduce fees for affordable housing projects.

The Town of Superior can enhance the viability of income-restricted affordable housing projects by offering development fee reductions or waivers which help lower the overall development costs for a project, making it more feasible to develop a project. Many communities offer partial or full waivers of planning fees, permit fees, impact fees, or utility connection fees to projects that include affordable units. While this can be an easy way to offer real financial benefit to projects that provide affordable housing, jurisdictions often rely on these fees to provide essential services. As a result, most often when jurisdictions waive some or all fees for a project, the jurisdiction covers the fees that would have been paid by the project through other general fund sources, which basically subsidizes these fees.

To effectively implement such program, the Town must make strategic decisions to the following:

- Conduct an analysis to see how waiving or reducing impact fees for affordable housing projects could impact the Town's overall general fund;.
- Consider selectively reducing only certain development-related fees and setting a sunset date or cap on eligible projects to gauge program's demand and impact;.
- Identify alternative revenue sources or new revenue sources, such as the Boulder County Affordable Housing tax extension to subsidize/compensate for the waived fees;.

- Consider conducting a detailed financial feasibility analysis and calibrate the inclusionary housing ordinance to tailor development incentives and determine what enhanced incentives could be provided to further affordability goals within development projects (e.g., deeper affordability or a greater number/percentage of affordable units).

Instead of offering fee reductions or exemptions, the Town might consider implementing a development fee deferral program. This program would align with the developer's financial planning by allowing them to pay development fees when the property begins to generate revenue through rent or sales rather than at the time of permit issuance. Such an arrangement would enable developers to manage payments as funds become available, potentially reducing the need for additional financing and the associated interest costs on construction loans.

Timeline:	Short-term
Action:	One-time
Partners:	BCHA, other housing developers
Level of Effort	Moderate
Income Level Served:	80% AMI and below
Impact Level:	High
Strategy Type:	Housing Production, Regulatory

STRATEGY
2.3. Explore funding or partnerships to reduce the cost of land for affordable housing.

Superior is primarily a built-out community and some future housing will require redevelopment, infill development, or conversion of property to a more productive use. The Town should consider using Town-owned land or other undeveloped properties that could be used for new affordable homes. The cost of land is a significant portion of the overall cost to develop housing, and the Town can take an active role in helping to overcome this barrier.

Action 2.3.1	Create a land donation, land acquisition or land banking program.	

THE DETAILS

2.3.1. Create a land donation, land acquisition or land banking program.

This action would establish a comprehensive land disposition policy that clearly outlines its goals for the use of publicly owned land, including the purchase of land and creating a priority for affordable housing development. In residential development, land is often the largest expense, which can make up roughly 20 percent of the overall project costs. Subsidizing or reducing this cost, or using Town-owned land, for the creation of affordable housing can substantially increase the financial feasibility and/or the number of affordable housing units. A key element of this program is partnerships with affordable housing providers to build affordable housing units and to redevelop vacant or underutilized land.

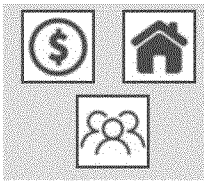
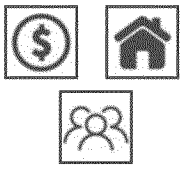
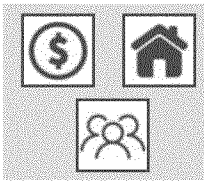
Program details should consider the following:

- Criteria to assess specific sites for affordable housing (e.g., location, zoning, readiness for development, size, value, etc.).
- Criteria for purchasing vacant or underutilized land for affordable housing (e.g., value, size, zoning, infrastructure needs, readiness, etc.)
- Establish a formal partnership agreement with local nonprofit housing providers and builders to support the site's development and access to construction funding, as well as ongoing administrative monitoring of affordability.
- Outline a disposition strategy for when to hold, develop, or sell land based on market conditions.
- Require terms of affordability (e.g., deed restrictions).
- Develop pre-approved ADU permit plans to streamline the review process and reduce cost.

Timeline:	Mid/Long-term
Action:	One-time
Partners:	BCHA, other non-profit housing providers
Level of Effort	High
Income Level Served:	120% AMI and below
Impact Level:	High
Strategy Type:	Housing Production, Partnership

STRATEGY
2.4. Explore opportunities to generate and manage revenue for affordable housing development.

The Town primarily relies on federal, state, and county funding to support housing development and services. Creating a dedicated housing trust fund to manage revenue from a variety of sources can promote the construction of affordable housing, and to help support a range of actions including assistance to first-time homebuyers, providing supportive housing, and other services.

Action 2.4.1	Explore the creation of a housing trust fund to support a variety of affordable housing activities.	
Action 2.4.2	Explore the creation of a commercial and/or residential linkage fee to provide financial support of affordable housing.	
Action 2.4.3	Establish the fee-in-lieu amounts as intended in the inclusionary housing ordinance.	

THE DETAILS

2.4.1. Explore the creation of a housing trust fund to support a variety of affordable housing activities.

A housing trust fund is a dedicated source of funding created by jurisdictions to support affordable housing initiatives. Their popularity is mostly due to their funding flexibility. The primary purpose of housing trust funds is to provide financial assistance for the development, maintenance, and support of affordable housing projects.

This financial assistance can include things like:

- Funding for the construction of new units.
- Subsidies/rental assistance.
- Purchasing of existing residential properties.
- Renovations and remodels of existing housing stock.
- Programmatic support related to housing.

Housing trust funds are aimed at addressing housing shortages, improving housing affordability, and assisting vulnerable population groups in obtaining stable housing. The funding of these trusts often comes from specific revenue sources such as one-time general fund allocation and ongoing funding from fees and taxes.

Example Fees and Taxes

- Residential and Commercial Impact Fees
- Inclusionary Housing In-Lieu Fees
- Sale of CityTown-Owned Land
- Real Estate Transfer Tax
- Short-term Rental Fee

Timeline:	Mid/Long-term
Action:	One-time
Partners:	N/A
Level of Effort	High
Income Level Served:	80% AMI and below
Impact Level:	High
Strategy Type:	Housing Production, Funding, Programmatic

2.4.2. Explore the creation of a commercial and/or residential linkage fee to provide financial support for affordable housing projects.

A commercial linkage fee is a fee applied to new commercial development like office or retail. This fee is charged because these developments often lead to higher employment and demand for housing, which overall puts upward pressure on housing demand and increases home prices. The revenue collected from these fees is used to help fund affordable housing projects, making it easier for people of all income levels to find homes in the community. This fee nexus connects the growth of business space directly with efforts to keep housing affordable.

If established, the Town of Superior can utilize funds from a commercial linkage fee and funnel them to the housing trust fund to directly finance the development of income-restricted housing projects or other affordable housing needs.

Additional considerations include:

- Conduct a study on the impacts of a fee on commercial development to ensure it is balanced to support affordable housing goals without overburdening new commercial projects.
- Conduct a nexus study to establish a reasonable connection between the fee and the need for affordable housing, which is prerequisite for adopting the fee program.

Timeline:	Mid-term
Action:	One-time
Partners:	N/A
Level of Effort	High
Income Level Served:	80% AMI and below
Impact Level:	High
Strategy Type:	Housing Production, Funding, Programmatic

2.4.3. Establish the fee-in-lieu amounts as intended in the Inclusionary Housing Ordinance.

In 2020 the Town of Superior passed an inclusionary Housing Ordinance to advance affordable housing in the Town, and to support the Boulder County Regional Housing Partnership's goal of 12% of all housing being affordable. The ordinance requires that new residential developments of 10 units or more are required to have 15 percent of the units as restricted residential units serving persons making up to 80 percent of AMI. The ordinance provides a fee-in-lieu option,which allows developers to pay a fee instead of building affordable housing units within their new developments. The fee collected is then used by towns and cities to fund affordable housing projects elsewhere in the community.

While the fee-in-lieu is an option for developers within the inclusionary housing ordinance, the actual fee amounts and schedule have not been established by the Board of Trustees or town staff. This action would initiate a study to help town staff calculate and establish a fee-in-lieu payment.

Generally, the fee-in-lieu should be similar to the cost of producing a unit on site. For example, if the fee is set too high or too low, it can disrupt the housing market, influence developer's choices of where to build, and impact the creation and location of affordable housing. Setting these fees is complex and must consider factors like market trends, construction costs, and the varying need for affordable housing across different income groups.

Additional considerations include:

- Conduct a fee-in-lieu study to understand how much it costs to build a unit in Superior and help set a fee rate.
- Conduct a more comprehensive study to calibrate the Town of Superior's inclusionary housing ordinance with a fee-in-lieu study and development feasibility that models a tiered incentives program.

Timeline:	Short/Mid-term
Action:	One-time
Partners:	N/A
Level of Effort	High
Income Level Served:	80% AMI and below
Impact Level:	High
Strategy Type:	Housing Production, Funding, Programmatic

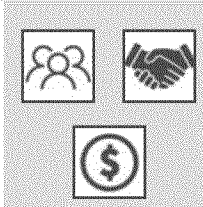
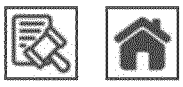
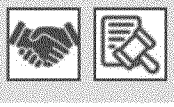
Objective 3

Remove Housing Barriers for Those that Encounter Them

Superior residents emphasized the need for greater access to housing for specific population groups such as renters, low-income households, senior adults, and residents with intellectual and developmental disabilities. It is important for the Town to maintain and increase partnerships with organizations that provide programmatic support and that build housing units specific to the needs of these population groups. These types of organizations include nonprofit housing providers and builders, community organizations, and regional partners.

STRATEGY
3.1 Promote housing choices for seniors.

Superior has experienced an increase in the number of older adult households. This will increase the demand for home remodels to facilitate aging in place and an increased demand for multifamily developments with services geared to the varying needs of older adults.

Action 3.1.1	Explore programs and partnerships to support housing rehabilitation to help senior homeownerrs make reparis, accessibility modifications, or energy efficiency improvements to their homes.	
Action 3.1.2	Explore land use policy changes to support the development of housing for seniors.	
Action 3.1.3	Explore incentive programs and partnerships that promote the creation of senior housing.	

THE DETAILS

3.1.1. Explore programs and partnerships to support rehabilitation to help senior homeowners make repairs, accessibility modifications or energy efficiency improvements to their homes.

Several housing providers and some city housing departments offer programs to assist homeowners and tenants of single-family homes with housing rehabilitation and major home repairs (e.g., roof replacements, plumbing, heating, or electrical). These home rehabilitation programs can also help occupants make their homes safer and livable by offering low-cost loans and grants to make needed accessibility improvements such as constructing ramps, widening doorways, and modifying bathrooms and kitchens.

Both the City of Boulder and the City of Longmont have a housing rehabilitation program that helps occupants of single-family homes make needed improvements to their homes. Only eligible households are able to access these resources, which typically include income qualifications, must be within the jurisdiction limits, and must be eligible for home repairs/improvements.

The Colorado Energy Office provides a weatherization assistance program to all counties in Colorado. Promoting this program on a centralized housing resource page within the Town's webpage can increase the awareness of this program among residents and improve the quality of housing.

The Town of Superior is limited on funding and the number of new staff it could add to its team to create and administer new programs (e.g., home rehabilitation programs). However, the Town can examine the viability of partnering with existing programs, such as the Boulder-Longmont accessibility program, to provide services to Superior residents. This partnership will likely require ongoing annual funding to support with low-cost loans and or grants to residents.

Timeline:	Mid-term
Action:	Ongoing
Partners:	Boulder, Longmont, BCHA, State of Colorado, non-profits
Level of Effort	Moderate
Income Level Served:	80% AMI and below
Impact Level:	Medium
Strategy Type:	Programmatic, Partnership, Funding

3.1.2. Explore land use policy changes to support the development of housing for seniors.

The Town of Superior last updated its Comprehensive Plan in 2012 and since then several housing types have emerged that support a wide range of household needs that the current land use and zoning code does not allow.

To support the development of housing for seniors, the Town of Superior can take several actions in its upcoming Comprehensive Plan. These include but are not limited to:

- Zoning amendments. Modify zoning regulations to allow for higher density residential developments specifically tailored for seniors. This may include reducing minimum lot sizes, and relaxing height restrictions in strategic locations to encourage the construction senior housing.
- Mixed-use Zoning. Promote mixed use development that integrates residential living with retail, healthcare, and recreational facilities. This helps create an environment where seniors can live comfortably with easy access to services.

- Accessibility Requirements. Introduce or strengthen regulations that ensure all senior housing development projects are fully accessible. This may include wider doorways, no-step entries, elevators, and other features that accommodate mobility aids and enhance mobility for seniors.
- Transportation Access. Ensure that senior housing developments are located near public transportation routes and stations. Accessibility to transportation can substantially improve the quality of life for seniors, allowing them independence and easy access to healthcare services and the rest of the community.
- Cohousing. Encourage development of cohousing opportunities within Superior that can support senior residents with daily needs and improve social connections.
- Community Services Integration. Encourage the integration of community services within or nearby senior housing. This includes health care facilities, senior centers, and social services that are geared toward older adults.

Timeline:	Short-term
Action:	One-time
Partners:	Senior housing developers and service providers
Level of Effort	Moderate
Income Level Served:	All Income Levels
Impact Level:	Medium
Strategy Type:	Housing Production, Regulatory

3.1.3. Explore incentive programs and partnerships that promote the creation of senior housing.

Superior's senior population is rapidly growing, and it is unlikely to slow down as millennials and Gen Xers grow older. The lack of senior housing in Superior puts additional pressure on the existing housing stock as multiple households compete for the same housing because aging seniors who don't need large homes don't have alternative housing in Superior to move into. Superior has an immediate demand for senior housing and establishing an incentive program for higher-density housing can promote the creation of senior housing.

The following list of incentives can greatly help developers increase the viability of senior housing projects.

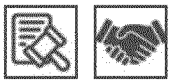
- Incentives for developers. Offer density and height bonus, fee reductions, or expedited permitting processes for developers who build affordable housing geared towards seniors.
- Land Dedication. Implement policies that set aside public land specifically for senior housing developments. This can reduce developers' land acquisition costs, thereby lowering the overall cost of housing units.

Timeline:	Short/Mid-term
Action:	Ongoing
Partners:	Senior housing developers and service providers
Level of Effort	Moderate
Income Level Served:	All Income Levels
Impact Level:	High
Strategy Type:	Housing Production, Partnerships

STRATEGY

3.2. Promote housing for people with intellectual and developmental disabilities.

While the Town of Superior does not directly produce or control housing, it can partner with organizations that serve the housing needs of people with intellectual and developmental disabilities (IDD).

Action 3.2.1	Support and/or partner with mission driven affordable housing providers to provide affordable housing and support services for people with IDD in the Town.	
Action 3.2.2	Evaluate the Town's group home regulations to identify barriers to group home development.	

THE DETAILS

3.2.1. Support and/or partner with mission driven affordable housing providers to provide affordable housing and support services for people with IDD in the Town.

Through the community engagement process, residents expressed the need for housing for specific population groups, particularly for those with intellectual and developmental disabilities. While this housing type is less commonly built because residents require services tailored to their specific needs, these residents also require housing to be affordable. Several factors, including market demand, rent, service and programmatic costs, and development costs, can make this housing type challenging to build. However, partnering with agencies like Trailhead Community, which helps Colorado communities build this housing type, can provide insights into the type of help cities and towns can provide to promote this type of housing development.

To help meet the unique needs for this population, there are several state and regional organizations that offer many different programs that assist both children and adults with intellectual and developmental disabilities. Most programs provide a form of educational, advocacy, self-sufficiency, and recreational programs to support children and adults with all aspects of their life journey. Supporting and promoting these programs on Town-owned web pages can increase awareness among residents and provide valuable resources and information sharing.

Timeline:	Mid-term
Action:	Ongoing
Partners:	Trailhead Community, other IDD housing providers
Level of Effort	Moderate
Income Level Served:	80% AMI and below
Impact Level:	Medium
Strategy Type:	Partnerships

3.2.2. Evaluate the Town's group home regulations to identify barriers to group home development.

Group homes, which provide residential accommodations and supportive services to specific populations like seniors, individuals with disabilities, or those recovering from substance abuse, can face regulatory barriers that impede the development of this housing type.

The Town of Superior should consider reviewing and amending the following regulatory elements that often limit the development of group homes.

- Zoning Restrictions. Many cities and towns have zoning laws that restrict the locations where group homes can be established. These restrictions might limit group homes to certain areas that are not suitable for the residents to access community services and support networks.
- Occupancy Limits. Regulations often cap the number of occupants allowed in residential dwellings, which can be problematic for group homes that need to accommodate more individuals to be economically viable or to fulfill their mission.
- Permitting Process. The permitting process can be cumbersome and time-consuming, with multiple levels of approval needed. This can often lead to community pushback that influences local governments to impose stricter regulations or to reject proposals altogether. Simplifying the permit approval process without the need for public hearings or Town Board approvals can help expedite the process and increase the likelihood of this development being built.
- Impact on Local Services. Local regulations might consider the potential impact of group homes on neighborhood services and infrastructure (e.g., increased demand for local healthcare or other services), which can lead to additional requirements or limitations being placed on these homes.

Timeline:	Short/Mid-term
Action:	One-time
Partners:	N/A
Level of Effort	Moderate
Income Level Served:	All Income Levels
Impact Level:	Medium
Strategy Type:	Regulatory, Partnership

STRATEGY

3.3. Improve access to housing resources.

Ensuring renters have access to housing-related resources and information can help improve housing stability.

Action 3.3.1	Create a centralized Town webpage that provides links to regional housing provider programs that serve Superior residents.	
Action 3.3.2	Advocate for and support existing regional and state tenant protection regulations that serve to improve outcomes for renters.	

THE DETAILS

3.3.1. Create a centralized Town webpage that provides links to regional housing provider programs that serve Superior residents.

Having a centralized webpage dedicated to housing resources offers significant benefits to residents. It serves as a one-stop shop for residents, providing easy access to comprehensive information about local and regional housing programs. This can include information on affordable housing options, emergency shelters, rental assistance, home rehabilitation, and homeownership options. This kind of webpage can simplify the search process, saving residents time and effort. Additionally, it can help increase awareness and utilization of available housing services, ensuring that more residents benefit from the support they need. For the Town of Superior, this centralized hub enhances communication with residents and promotes transparency in available services.

The Town of Superior should consider translating this webpage into multiple languages to ensure that a diverse set of residents have access to the same resources as others.

Timeline:	Short-term
Action:	Ongoing
Partners:	BCHA and other housing providers
Level of Effort	Moderate
Income Level Served:	All Income Levels
Impact Level:	Medium
Strategy Type:	Programmatic, Partnerships

3.3.2. Advocate for and support existing regional and state tenant protection regulations that serve to improve outcomes for renters.

Advocating, supporting, and expanding tenant protection laws can further the housing stability of renter households. This support can prevent unlawful evictions and rent hikes, contributing to housing stability in the community. Additionally, it fosters a fairer rental market where tenants can feel safe and landlords are held accountable to specific standards. Cities and towns have gone above standard tenant protection laws, implementing emergency ordinances to further tenant protections. Ordinances that the Town of Superior can consider include:

- Require ample notice periods for rent increases (e.g., 6-month notice); lease terminations; and the need to vacate due to renovations.
- Prohibit discrimination based on source of income.
- Require landlords to provide a summary of tenant's rights upon leasing a rental unit.

Timeline:	Short/Mid-term
Action:	Ongoing
Partners:	BCHA and other housing providers
Level of Effort	Moderate
Income Level Served:	All Income Levels
Impact Level:	Medium
Strategy Type:	Programmatic, Partnerships

STRATEGY
3.4. Support English Language Learners and BIPOC residents.

Non-English speakers often face challenges due to the absence of translators and translated materials. Tenants sometimes need to report issues requiring repairs in their apartments but struggle to communicate clearly with landlords or city code compliance personnel. Consequently, they typically turn to cultural organizations for help with translation and comprehension of documents, such as those pertaining to their housing conditions.

Action 3.4.1	Form partnerships and work with culturally specific organizations to promote the availability of programs, incentives and housing availability.	
Action 3.4.2	Remove language barriers to accessing housing resources and information by using technological solutions and/or partnering with culturally specific organizations.	

THE DETAILS

3.4.1. Form partnerships and work with culturally specific organizations to promote the availability of programs, incentives and housing availability.

Partnering with culturally specific organizations to promote housing programs and incentives can bring significant benefits to Superior residents. These organizations often have insight into the needs and preferences of the community they serve, enabling more effective communication and outreach about housing options. Such partnerships can ensure that information about housing programs is culturally relevant and accessible, which increases engagement and trust among community members. These collaborations can also create a two-way information sharing and help inform the Town about how to tailor housing initiatives to better address the unique challenges faced by different cultural groups.

Timeline:	Short/Mid-term
Action:	Ongoing
Partners:	Boulder County Housing, SUMA
Level of Effort	Moderate
Income Level Served:	All Income Levels
Impact Level:	Medium
Strategy Type:	Programmatic, Partnerships

3.4.2. Remove language barriers to accessing housing resources and information by using technological solutions and/or partnering with culturally specific organizations.

While there is no "one-size-fits-all" approach to meeting the diverse needs of populations living in Superior, there are a few steps the Town can take to increase access to housing resources. These steps include removing language barriers like translating webpages and housing documents in multiple languages to increase awareness of available resources. Commonly, language barriers can create challenges in comprehending the types of assistance residents can access and determining their eligibility for various programs.

Timeline:	Short/Mid-term
Action:	Ongoing
Partners:	Boulder County Housing, SUMA
Level of Effort	Low
Income Level Served:	All Income Levels
Impact Level:	Medium
Strategy Type:	Programmatic, Partnerships

HOUSING NEEDS ASSESSMENT
TOWN OF SUPERIOR

December 2023

Prepared for: Town of Superior

Final Report

ECONorthwest
ECONOMICS · FINANCE · PLANNING

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Executive Summary

The rising housing prices in the Boulder County region impact all communities differently, and each community is searching for solutions tailored to their specific challenges. Superior faces similar issues to other regional communities, including the unaffordability of rental and homeownership options, increasing construction costs, and limited available land. However, Superior also has its own distinct challenges that necessitate focused solutions.

An essential component of Superior's solutions is this Housing Needs Assessment (HNA) report, which synthesizes background data and information to comprehend Superior's current demographic and housing market conditions. The HNA examines various housing-related factors, including income, employment, population, household characteristics, housing costs, and affordability. The HNA serves as a foundation for the development of the housing strategic plan.

The following section summarizes the most salient findings of this housing needs assessment.

Who Lives in Superior Today?

The population of Superior is generally younger, and most households consists of families with children.

- Superior's population skews younger, with the largest cohort being residents under 19 years of age (30 percent) followed by those 25 to 44 years old (29 percent).
- Approximately 40 percent of households are couples with children, with half of Superior households comprising 3 or more persons, indicating that these household characteristics are of families.

Superior's senior population is rapidly growing. This growth is unlikely to slow as millennials and Gen Xers grow older.

- Seniors aged 65 years and older experienced the fastest growth since 2011, increasing by 246 percent. This notable increase in the population aged 65 years and older suggests that Superior is experiencing a substantial aging trend. This could be due to factors such as improved health care, an attractive environment for retirees, families aging in place, or an influx of older adults seeking a peaceful lifestyle.
- Millennials and Gen Xers represent about 57 percent of Superior's population. As this population ages, Superior's senior population will continue to grow.

Renter households are typically smaller in size (1 and 2-person households) and generally live in apartments.

- About 62 percent of the renter-occupied housing in Superior is occupied by households with 1 to 2 persons.
- Owner-occupied housing is generally occupied by families with 3 or more persons.

Superior is an affluent community where households have one of the highest median household incomes in the County.

- In 2021, Superior had a median household income of $131,000—the second-highest median household income when compared to the following comparison cities of Erie, Lafayette, Louisville, Longmont, and Boulder.
- Incomes for owner households are generally higher than renter households.
- The median household income of renters and owners in Superior is the highest when compared to Erie, Lafayette, Louisville, Longmont, and Boulder.

Superior's population has grown to be more racially and ethnically diverse.

- While the majority (70%) of Superior's population identify as White, most racial and ethnic groups have increased since 2011. The Asian population is the second-largest racial group (17%), followed by the Hispanic population (9%).
- The Black or African American population was the only racial group that experienced a decrease since 2011.

What Are the Current Housing Conditions in Superior?

The majority of Superior's housing stock is single-family detached—with limited diversity of housing types.

- The majority (60%) of housing inventory in Superior is single-family detached. Superior primarily built single-family homes throughout the 2000s and 2010s. Only starting in 2020 did multifamily building permits outnumber single-family permits.

The Marshall Fire has further exacerbated the lack of available housing in Superior, while demand for housing is high and overall housing vacancy is very low.

- The Marshall Fire of 2021 destroyed 390 residential properties and 4 commercial properties.

- Superior had a housing vacancy of 2.5 percent in 2021—one of the lowest compared to Erie, Lafayette, Louisville, Longmont, and Boulder. For comparison, Boulder County had a housing vacancy of 5.9 percent in 2021.

Homeownership rates have fallen in Superior, while more households tend to rent.

- In Superior, homeownership rates have decreased 10 percent since 2010, while homeownership rates remained stable in Boulder County and Colorado.
- The share of Superior households who rent increased from 30 percent in 2011 to 40 percent in 2021. This underscores the significance of having rental housing that is both of good quality and reasonably priced.

Incomes have not kept pace with the rising housing costs. Housing attainability in Superior has become challenging for many residents.

- While a household earning 100 percent of the area median income ($144,100) can afford the average rent, they cannot afford to purchase a home at the median price ($724,300). A Superior household would need to make $181,000 or more to afford the median-priced home in 2023. This suggests that higher-income households likely have a better chance of homeownership while lower and median-income households might be limited to renting.
- The inability of a moderate-income household to afford the median-priced home raises questions about the potential barriers to homeownership in Superior. Factors such as high down payment requirements, stricter mortgage lending criteria, and rising home prices relative to income growth can make it difficult for many households to enter the homeownership market.
- In 2021, about 40 percent of renter households in Superior were considered cost burdened. This means that these households are spending 30 percent or more of their annual income on housing costs.

What Types of Housing Will Future Residents Need?

Superior needs a diversity of housing types to support the needs of its existing residents and those who are employed in Superior but can't afford to live here. Increasing the supply of both renter and ownership product units is important for Superior.

- If the demand for housing, particularly for homeownership, exceeds the available supply, it can drive up home prices and make it challenging for households with moderate incomes to purchase a home. Similarly, if the demand for rental housing

exceeds the available supply, it can drive up rent prices and price out households that rent in Superior.

- Downtown Superior, a key growth area, has recently started construction and has built several hundred housing units of diverse housing types. Some future housing needs can be met by the new homes built in Downtown Superior while also looking for strategic locations for infill development.

As Superior's population ages, there will be a growing need for housing to accommodate this demographic group.

- Superior's aging population will need housing that meets various household needs such as wanting to downsize (smaller housing units), aging in place (adaptable homes and nearby services), or multigenerational living (attached or detached accessory dwelling unit).

Superior will have more middle-aged millennials wanting to get into the homeownership market.

- Homeownership for millennials will increase as they age. As a result, there will be a demand for starter homes and relatively affordable types of ownership and rental housing.
- Additionally, to accommodate the housing needs for this population group, there will need to be more one- and two-bedroom housing units and housing near major employment centers and services.

1. Introduction

1.1 Purpose and Context

Across Boulder County and beyond, the rising cost of renting and buying a home has created major housing challenges, especially in locations where housing supply hasn't kept pace with demand. Historically, Superior has enjoyed a relatively affordable housing market, but housing costs are also increasing here while supply is low. For example, as of June 2023, the average home sales price in Superior was $724,000, with homes selling in around 32 days. The homes lost to the Marshall Fire in 2021 further exacerbated our tight housing market.

To address this growing issue, the Town of Superior is conducting research to gain a better understanding of the housing needs and gaps specific to Superior residents. Through this research and engagement process, the Town aims to gather the necessary information and analysis to develop strategies and actions that will culminate in a plan to guide the Town's work in the coming years.

A critical and initial component of this work is the Housing Needs Assessment (HNA) that provides the data and analysis required to understand Superior's existing conditions and needs. The Housing Needs Assessment looks at many factors related to housing in Superior—such as income and employment, population and household characteristics, and housing costs and affordability—to provide a clear picture of the state of housing in Superior. The Housing Needs Assessment serves as a foundation for the development of the housing strategic plan.

1.2 Organization of This Report

The remainder of this document is organized into the following sections:

- **Section 2. Economic Trends and Conditions** summarizes key components of Superior's economy such as employment trends, wages, commute patterns, and household income.
- **Section 3. Demographic Profile** describes Superior's household characteristics and change over time, which is important for understanding resident's housing needs.
- **Section 4. Housing Profile and Market Trends** summarizes Superior's housing market, including housing supply, availability and vacancy, and development trends.

- **Section 5. Housing Attainability** summarizes housing costs in Superior and describes the different price points that households can afford based on area median incomes and wages.
- **Section 6. Marshall Fire Recovery** describes the Town's efforts to rebuild after the devastating Marshall Fire.
- **Section 7. Population Forecast** summarizes population forecasts in the next 20 years for Superior.
- **Section 8. Future Housing Need** summarizes the future housing need necessary to accommodate future population growth.

2.Economic Trends and Conditions

This section discusses key components of Superior's economy, which affect the demand for and cost of housing. The section summarizes Superior's employment trends, wages, commute patterns, household incomes, and other labor market indicators.

Key Findings

Superior is an affluent community where households have one of the highest median household incomes in the County.

- In 2021, Superior had a median household income of $131,000—the second-highest median household income when compared to Erie, Lafayette, Louisville, Longmont, and Boulder.
- Incomes for owner households are generally higher than renter households.
- The median household income for renters and owners in Superior is the highest when compared to Erie, Lafayette, Louisville, Longmont, and Boulder.

Continued employment growth linked to housing choices for large and growing sectors of the workforce.

- Between 2010 and 2020, Superior added 902 jobs, an increase of 51 percent. In comparison, Boulder County added 23,471 jobs, an increase of 18 percent.
- Superior's employment is concentrated in two industries: services and retail. Combined, these two industries make up approximately 71 percent of the total jobs in Superior.

- The services industry generally employs people with high skills and, as a result, wages earned in this industry average $84,000. The retail industry employs many lower-wage positions, with the average annual wage in Boulder County being $39,000. While a critical part of the economy, residents working in the retail industry may struggle to pay for housing in Superior where housing costs are high.

Most Superior jobs are filled by commuters who live outside of town, while most Superior residents commute elsewhere to work.

- Superior has a commute influx where 92 percent of jobs (2,462 positions) are filled by individuals who commute from locations outside of Superior. This could suggest that workers do not earn enough to afford to live in Superior.
- Superior residents commute elsewhere for work. A significant number of residents (5,846 individuals) from Superior travel to other counties for work. This highlights that residents commute long distances for work within the Denver Front Range region.

2.1 Income and Employment

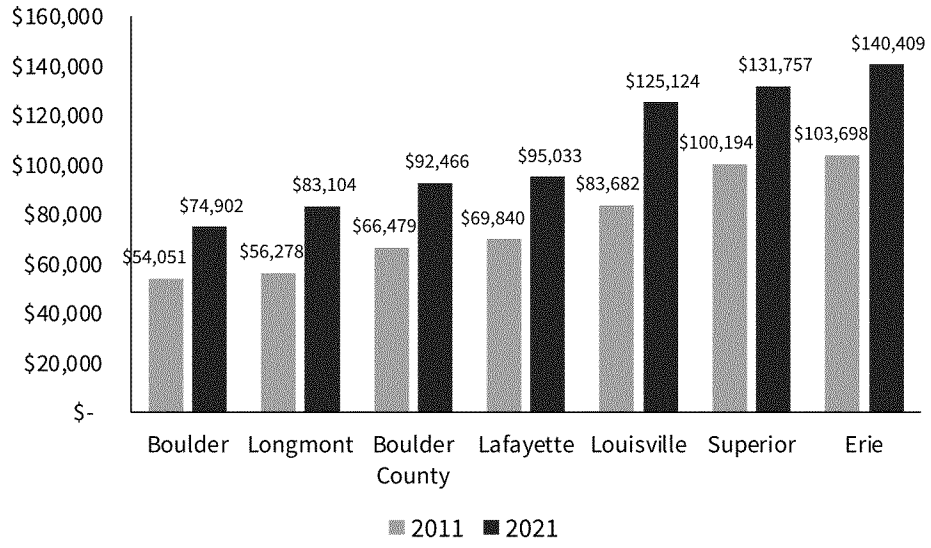
The ability of a household to acquire adequate housing is related to household income, whether earned or from other sources. Household income is oftentimes the crucial factor in evaluating the size and type of housing available for any given household. Household income can vary greatly across many demographic factors, including race, gender, tenure, and household type. While higher-income households have more discretionary income to spend on housing, low- and moderate-income households often face limited choices in the housing they can afford.

2.1.1 Household Median Income, 2011 and 2021

Since 2011, Superior has had the second-highest median household income when compared to the cities of Erie, Lafayette, Louisville, Longmont, and Boulder. In 2021, Superior had a median household income of $131,757. This is substantially higher than the median household income of $92,466 in Boulder County. Erie had the highest median household income at $140,409.

Exhibit 1. Median Household Income, Superior and Comparison Cities, 2011 and 2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



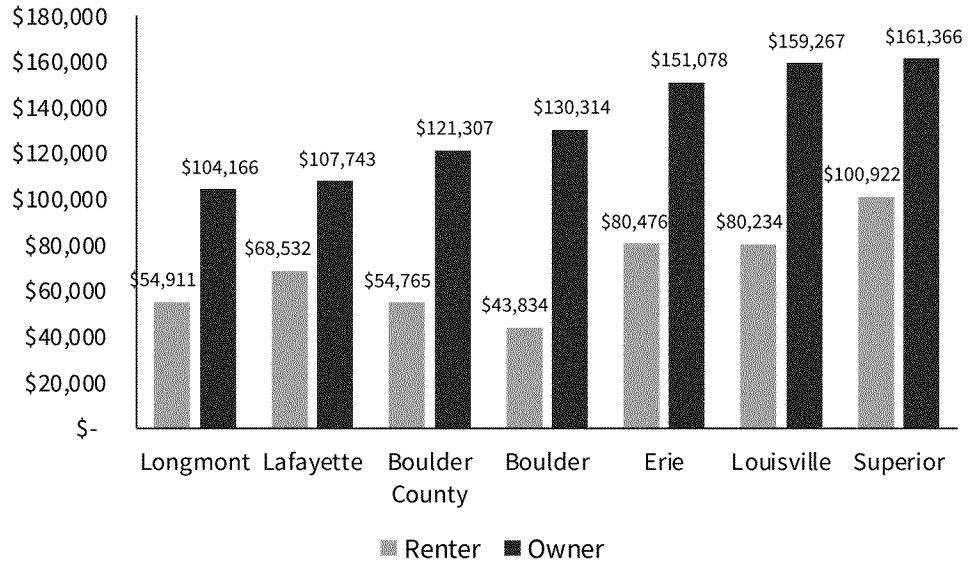
2.1.2 Renter Median Household Income vs Owner Median Household Income, 2021

Analyzing income disparity between renters and homeowners helps identify potential disparities in housing affordability. For example, if the median income of renters is significantly lower than that of homeowners, it might indicate that a larger portion of renter incomes are being dedicated to housing costs, potentially highlighting affordability issues for renters.

Superior has the highest renter and owner median household income when comparing it to the other comparison cities. Superior's renter median household income was $100,922 in 2021, while the owner median household income was $161,366; these trends indicate that Superior is an affluent community.

Exhibit 2. Renter Median Household Income vs Owner Median Household Income, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

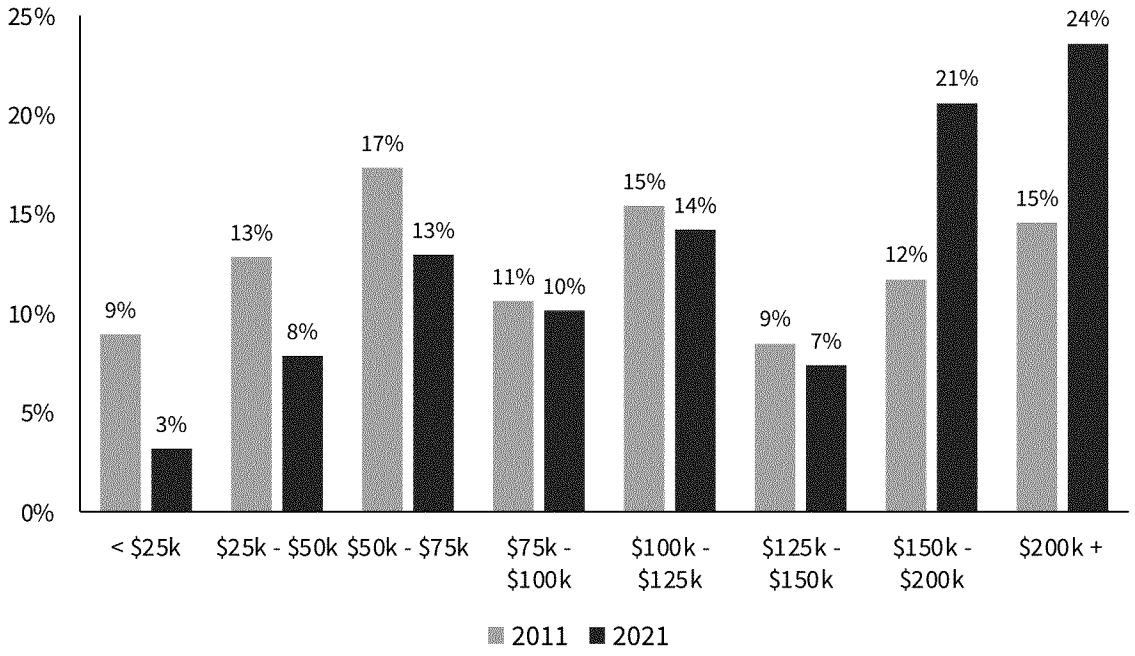


2.1.3 Household Income Distribution in Superior, 2011 and 2021

Since 2011, the share of households in Superior with the highest incomes has grown. In 2021, 45 percent of households had incomes greater than $150,000, compared to 27 percent in 2011. The share of households with incomes less than $75,000 has declined from 39 percent in 2011 to 24 percent in 2021. The share of households with moderate incomes has remained relatively stable during this period. Note that these amounts are not adjusted for inflation. The increase in households making over $150,000 and the decrease in households making $75,000 or less could indicate housing affordability challenges where rising housing costs and living expenses might be pushing out lower-income households.

Exhibit 3. Household Income Distribution, Superior, 2011 and 2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



* These incomes are in nominal dollars for each year. They are not adjusted for inflation.

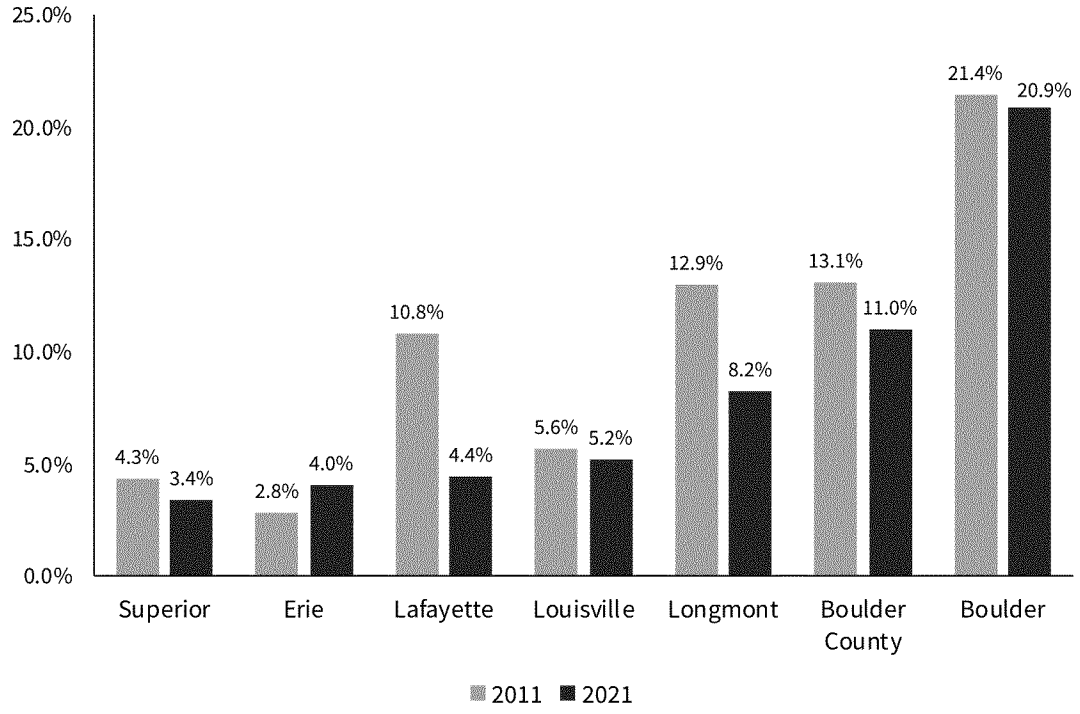
2.1.4 Poverty Rate

Monitoring the poverty rate over time is critical for assessing a community's needs and understanding hardships. A substantial change in the poverty rate over time can be a sign of an important trend, such as a deepening or an amelioration of economic distress or changes in the composition of an area's population due to a shortage of affordable housing.

In Superior, the share of people in poverty decreased from 4.3 percent in 2011 to 3.4 percent by 2021. Similarly, Boulder County and several comparison cities experienced a decline in the share of residents living in poverty. The overall decline in poverty rates in Superior and Boulder County indicate that there is a strong job market, which has provided stable employment opportunities for residents as well as an educated and skilled workforce.

Exhibit 4. Share of Population Living Below Poverty Level, Superior and Comparison Cities, 2011-2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



2.2 Employment Trends

2.2.1 Employment by Sector

Employment growth accompanied population growth in Superior between 2010 and 2020, especially in the sectors of manufacturing; education; and wholesale trade, transportation, and utilities (WTU). Between 2010 and 2020, employment in Superior grew 51 percent from 1,779 jobs to 2,681 jobs while Boulder County's employment grew 18 percent from 128,271 jobs to 151,742 jobs.

Between 2010 and 2020, employment in the goods-producing sector grew 364 percent, representing about 13 percent of the total employment in Superior. Services-producing jobs, which make up most of the jobs in Superior, grew 37 percent.

Services is the primary employment concentration in Superior, accounting for 48 percent of total jobs, and is mostly driven by the town's rapid population growth. Retail is the second-largest concentration of jobs in Superior, representing 23 percent of jobs in the town.

The finance, insurance, and real estate sector experienced a slight decline in jobs between 2010 and 2020.

Exhibit 5. Employment by Industry in Superior, 2010 and 2020

Source: Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employer Statistics (LODES)

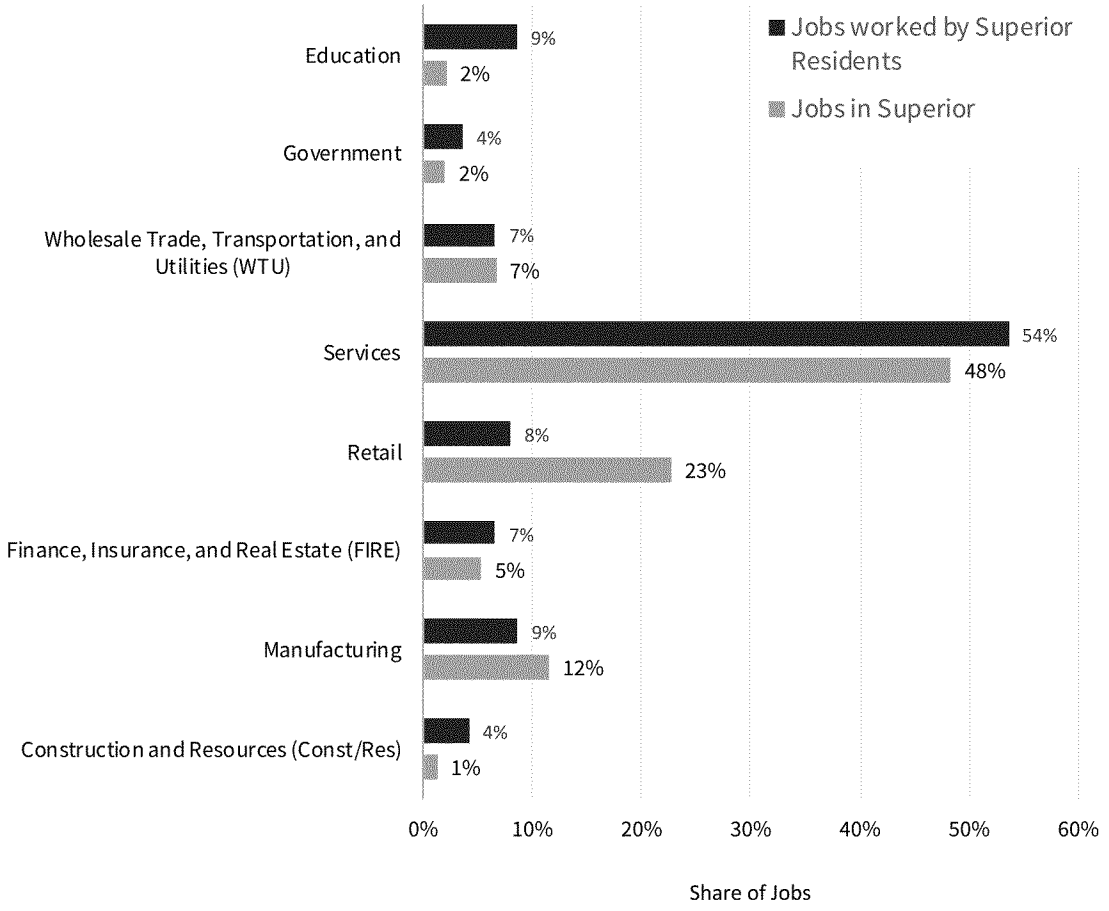
Industry	2010		2020		Percent Change
	Number	Percent	Number	Percent	2010-2020
Goods Producing	**74**	**4%**	**343**	**13%**	**364%**
Construction and Resources (Const/Res)	23	1%	34	1%	48%
Manufacturing	51	3%	309	12%	506%
Services Producing	**1,705**	**96%**	**2,338**	**87%**	**37%**
Finance, Insurance, and Real Estate (FIRE)	150	8%	143	5%	-5%
Retail	447	25%	609	23%	36%
Services	989	56%	1,296	48%	31%
Wholesale Trade, Transportation, and Utilities (WTU)	54	3%	179	7%	231%
Government	51	3%	54	2%	6%
Education	14	1%	57	2%	307%
Total Employment	**1,779**		**2,681**		**51%**

The exhibit below shows the jobs that Superior has and where residents work. Over half of Superior residents work in the services sector, where a typical worker earns approximately $84,000 annually in Boulder County. The other major industries where superior residents work include education, manufacturing, and retail. Residents working in education and retail on average earn $44,000 or less annually, while those working in manufacturing earn approximately $88,000 annually.

The services sector includes industries in information; professional, scientific, and technical services; management of companies and enterprises; administration and support; waste management and remediation; health care and social assistance; arts, entertainment, and recreation; and accommodation and food services.

Exhibit 6. Employment in Superior and Where Residents Work, 2020

Source: Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employer Statistics (LODES)



Overall, the County's employment has grown by 18 percent, an increase of 23,471 jobs. Compared to Superior, employment in Boulder County is concentrated more heavily in services, which makes up 59 percent of total jobs. The industries with the most growth between 2010 and 2020 include wholesale trade, transportation, and utilities (33 percent) and education (48 percent). As in Superior, the finance, insurance, and real estate sector across the County declined slightly, at 3 percent.

Exhibit 7. Average Employment by Industry in Boulder County, 2010-2020

Source: Bureau of Labor Statistics

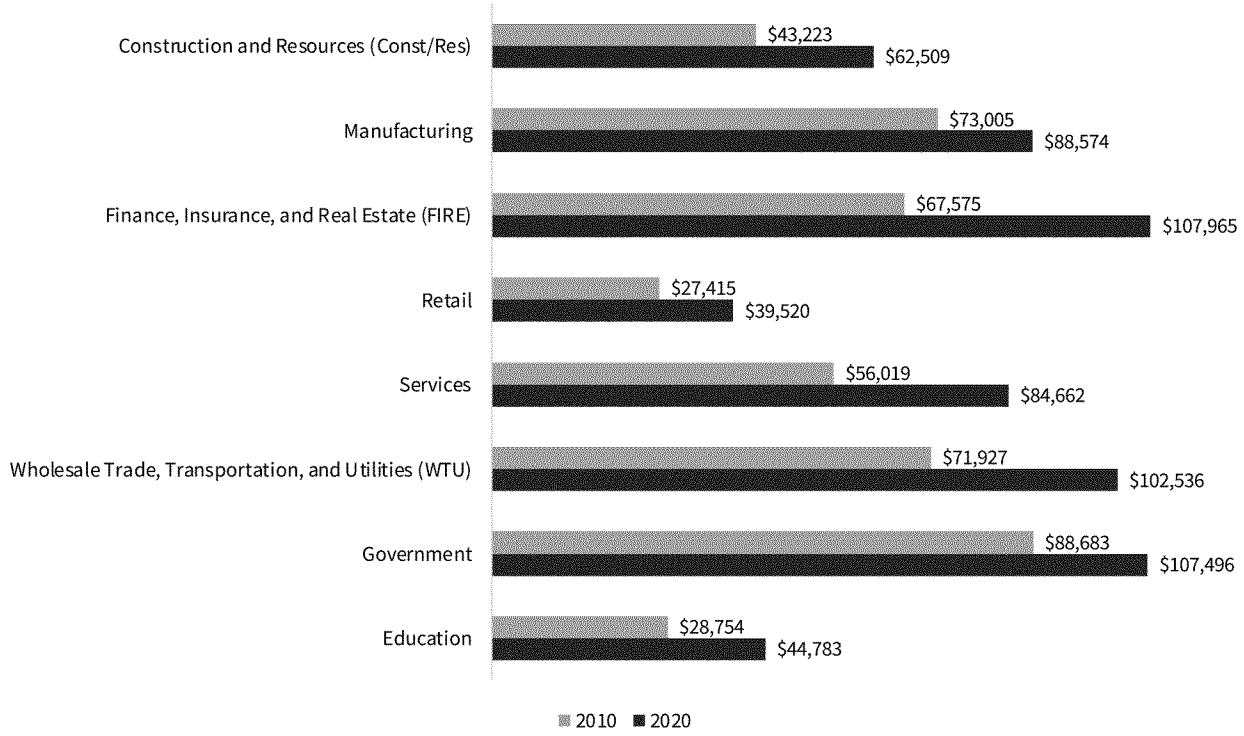
Industry	2010		2020		Percent Change
	Number	Percent	Number	Percent	2010-2020
Goods Producing	**20,173**	**16%**	**26,300**	**17%**	**30%**
Construction and Resources (Const/Res)	4,971	4%	6,186	4%	24%
Manufacturing	15,202	12%	20,114	13%	32%
Services Producing	**108,098**	**84%**	**125,442**	**83%**	**16%**
Finance, Insurance, and Real Estate (FIRE)	6,920	5%	6,716	4%	-3%
Retail	15,181	12%	16,551	11%	9%
Services	75,536	59%	88,922	59%	18%
Wholesale Trade, Transportation, and Utilities (WTU)	6,275	5%	8,332	5%	33%
Government	2,319	2%	2,153	1%	-7%
Education	1,867	1%	2,768	2%	48%
Total Employment	**128,271**		**151,742**		**18%**

2.2.2 Average Wages in Boulder County, 2010-2020

In Boulder County, average annual wages in the finance, insurance, and real sector have grown the most since 2010 (by 60 percent) despite the decline in overall employment in these categories, as shown in Exhibit 7. In 2020, these jobs had the highest average annual wage at $107,965. The government and wholesale, trade, and utilities (WTU) industries also have annual wages greater than $100,000 as of 2020. Manufacturing and government jobs in Boulder County experienced the lowest wage increase since 2010 (21 percent). Average wage data is only available at the County level.

Exhibit 8. Average Wages by Industry in Boulder County, 2010-2020

Source: Bureau of Labor Statistics



2.2.3 Education Attainment

A community with a significant percentage of college-educated individuals often sees a concentration of advanced-skill jobs with higher pay, leading to higher household incomes.

A large share of Superior's population is college educated. As of 2021, 40 percent of Superior residents had a bachelor's degree and 37 percent had a graduate degree. Only 7 percent of adult residents had a high school degree or had not completed high school.

Exhibit 9. Education Attainment in Superior, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

Education Attainment	Total	Percent
Less than High School Degree	161	2%
High School Degree	421	5%
Some College or Associate Degree	1,397	16%
Bachelor's degree	3,494	40%
Advanced Degree	3,222	37%

2.2.4 Commuting Patterns

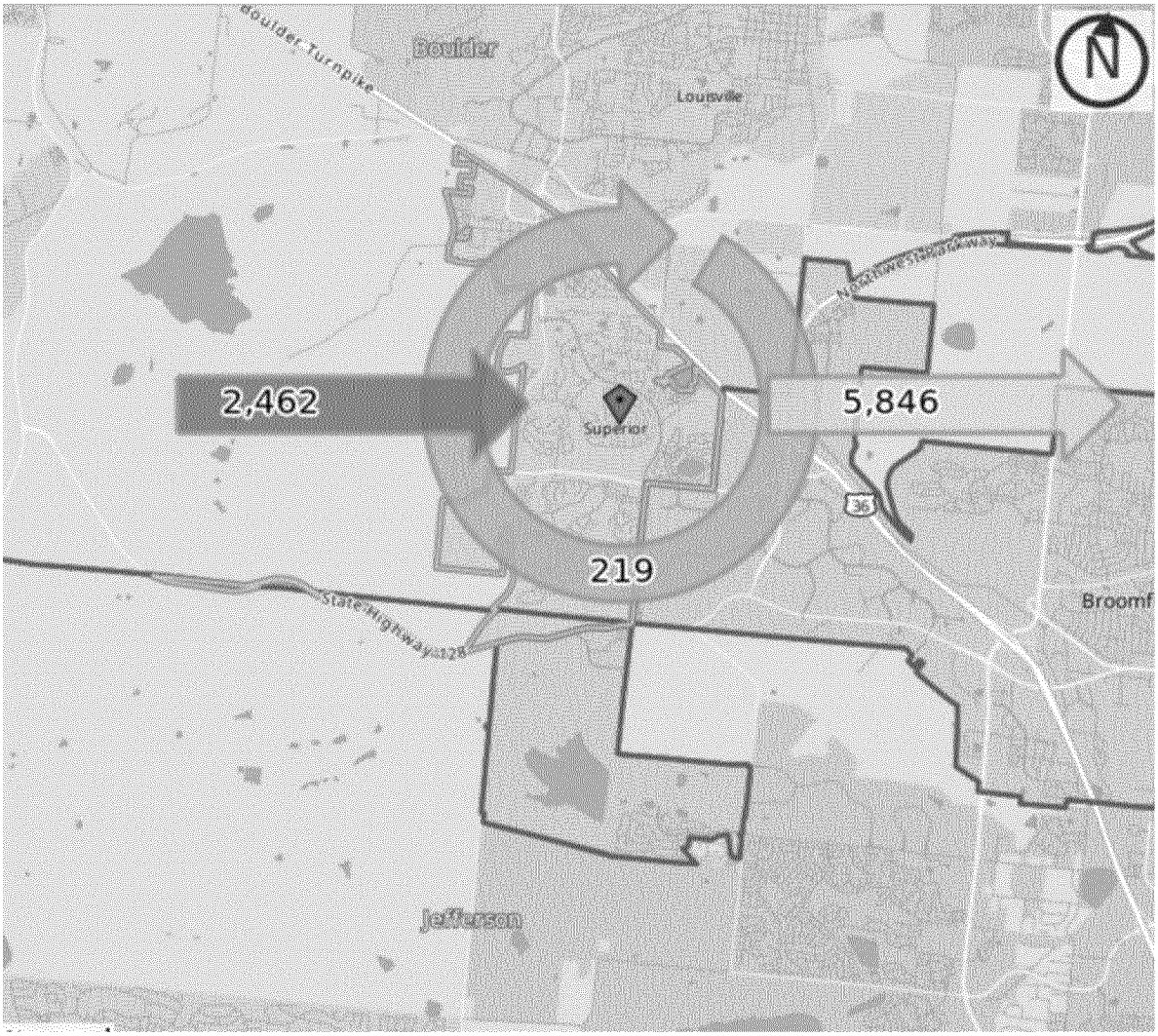
According to the Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employer Statistics (LODES) program, 2,462 of the 2,681 jobs located in Superior (92 percent) are held by commuters coming in from outside of the town. The other 219 jobs (8 percent) are held by residents who also live in Superior. An additional 5,846 jobs are held by residents of Superior who travel to another county for work.

The top 5 counties where residents of Superior travel for work include the following:

39.1%	**17.3%**	**11.0%**	**8.7%**	**7.8%**
2,369	1,050	669	526	473
Boulder County	Denver County	Jefferson County	Adams County	Broomfield County

Exhibit 10. Commuting Patterns, Superior, 2020

Source: Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employer Statistics (LODES)



3. Demographic Profile

This section provides an overview of Superior's demographics, which provides a foundational context for the housing market profile and conditions. The discussion is organized around population growth and forecast, household characteristics, and race and ethnicity.

Key Findings

Key highlights in Superior's demographic trends include:

Superior grew steadily in the past decade, and forecasts indicate that it will grow at a slightly faster rate over the next two decades.

- Between 2011 and 2021, Superior grew by 482 new residents. Compared to other cities in Boulder County, Superior experienced the smallest population growth by percentage.
- In the next two decades, Boulder County is anticipated to grow by nearly 52,000 people, which will continue to add pressure for additional housing in Superior to accommodate a portion of this growth.

The population of Superior is generally younger, and most households consists of families with children.

- Superior's population tends to skew younger, where the population under 19 years of age comprises the largest cohort of residents (30 percent) followed by those 25 to 44 years old (29 percent).
- Approximately 40 percent of households are couples with children. Half of Superior households have 3 or more persons, indicating that these household characteristics are of families.

Superior's senior population is rapidly growing. This growth is unlikely to slow as millennials and Gen Xers grow older.

- Seniors aged 65 years and older experienced the fastest growth since 2011, increasing by 246 percent. This notable increase in the population aged 65 years and older suggests that Superior is experiencing a substantial aging trend. This could be due to factors such as improved health care, an attractive environment for retirees, families aging in place, or an influx of older adults seeking a peaceful lifestyle.
- Millennials and Gen Xers represent about 57 percent of Superior's population. As these populations age, Superior's senior population will continue to grow.

Superior's population has grown to be more racially and ethnically diverse.

- While the majority of Superior's population identify as White (70 percent), most racial and ethnic groups have increased since 2011. The Asian population is the second-largest racial group (17 percent), followed by the Hispanic population (9 percent).

- The Black or African American population was the only racial group that experienced a decrease since 2011.

3.1 Household Characteristics

The characteristics of a community's households impact the type of housing needed in that community. This section discusses the household characteristics affecting the housing needs of Superior residents.

The U.S. Census Bureau defines a household as all persons who occupy a housing unit, which may include families, single persons, and unrelated persons sharing a housing unit (such as roommates). Persons residing in group quarters such as dormitories or retirement homes are not considered households.

The characteristics of a community's households serve as important indicators of the type and size of housing needed in the town. For instance, single-person households often occupy smaller apartment units or condominiums, such as studios, one-bedroom units, or accessory dwelling units (ADUs). Married couples often prefer larger single-family homes, particularly if they have children. This underscores the need to provide a diversity of housing opportunities.

3.1.1 Population and Households

Population growth and household formation are the primary drivers of demand for housing. The rate of population growth and household characteristics heavily influence the demand for specific housing types.

Exhibit 11 shows population growth in Superior and comparison cities within Boulder County between 2011 and 2021. Since 2011, Superior has added 481 new residents. This increase represents the smallest growth among the comparison cities in real terms and the smallest average annual growth rate, at 0.38 percent.

Exhibit 11. Historical Population Growth, Superior and Comparison Cities, 2011-2021

Source: DOLA, Colorado State Demography Office, ECONorthwest

			2011-2021 Change	
	2011	2021	Number	AAGR
Superior	12,572	13,053	481	0.38%
Erie	8,711	13,124	4,413	4.18%

	2011	2021	2011-2021 Change	
			Number	AAGR
Lafayette	24,722	31,035	6,313	2.30%
Longmont	87,390	98,117	10,727	1.16%
Louisville	18,560	20,855	2,295	1.17%
Boulder	100,233	106,978	6,745	0.65%
Boulder County	300,526	329,793	29,267	0.93%

Exhibit 12 represents historical household growth in Superior and comparison cities. Between 2011 and 2021, Superior grew by an estimated 243 households, or a 5 percent increase in total households. This increase was the lowest rate among the comparison cities. In comparison, Erie saw the largest household growth during the same period, at 48 percent (or 1,408 households).

Exhibit 12. Historical Household Growth, Superior and Comparison Cities, 2011-2021

Source: DOLA, Colorado State Demography Office, ECONorthwest

	2011	2021	2011-2021 Change	
			Number	Percent
Superior	4,539	4,781	243	5%
Erie	2,923	4,331	1,408	48%
Lafayette	9,772	12,414	2,642	27%
Longmont	34,004	39,563	5,559	16%
Louisville	7,669	8,618	948	12%
Boulder	46,404	49,299	2,894	6%
Boulder County	121,382	132,009	10,627	9%

3.1.2 Average Household Size

Superior had an average household size of 2.73 in 2021. This is the second-largest average household size when compared to the comparison cities and County. Boulder County had an average household size of 2.38.

Exhibit 13. Average Household Size, Superior and Comparison Cities, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

2.73	3.03	2.50	2.48	2.42	2.17	2.38
Superior	Erie	Lafayette	Longmont	Louisville	Boulder	Boulder County

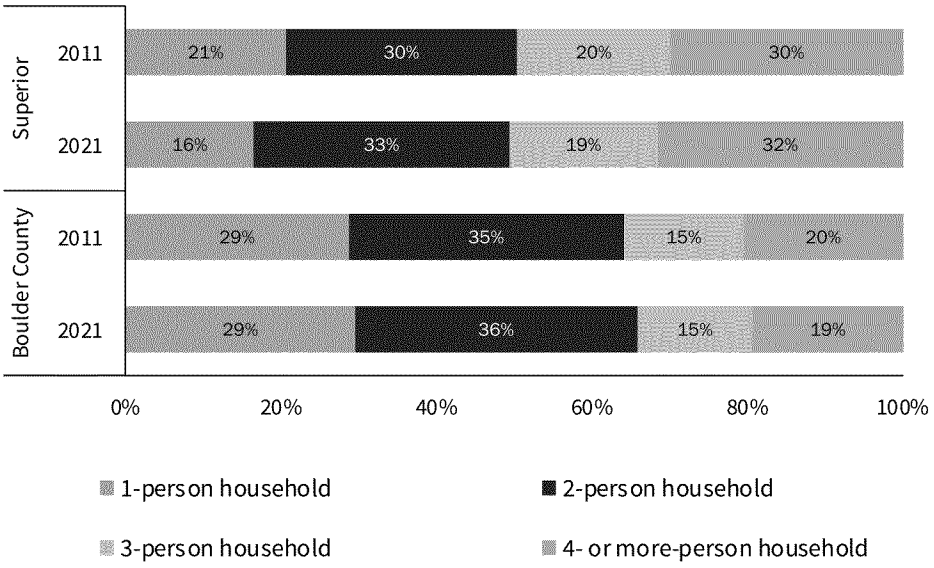
3.1.3 Household Size

The households in Superior comprised of 3 persons and 4 or more persons make up 51 percent of the total households, while 2-person households make up the second-largest household type and make up 33 percent of all households. Between 2011 and 2021, there was a considerable shift in Superior's household size formation. Most notably, 2-person households and those with 4 or more persons increased, while 1-person and 3-person households decreased. This trend could suggest that there are some affordability challenges in Superior for 1-person households or a lack of available and appropriately sized housing.

Compared to Superior, households in Boulder County comprised of 1 or 2 persons make up 65 percent of all households in the County. Households comprised of 3 persons and 4 or more persons make up 35 percent. These trends suggest that households in Superior are typically families with 3 or more persons and couples, while in Boulder County they represent single and couple households.

Exhibit 14. Household Size, Superior and Boulder County, 2011 and 2021

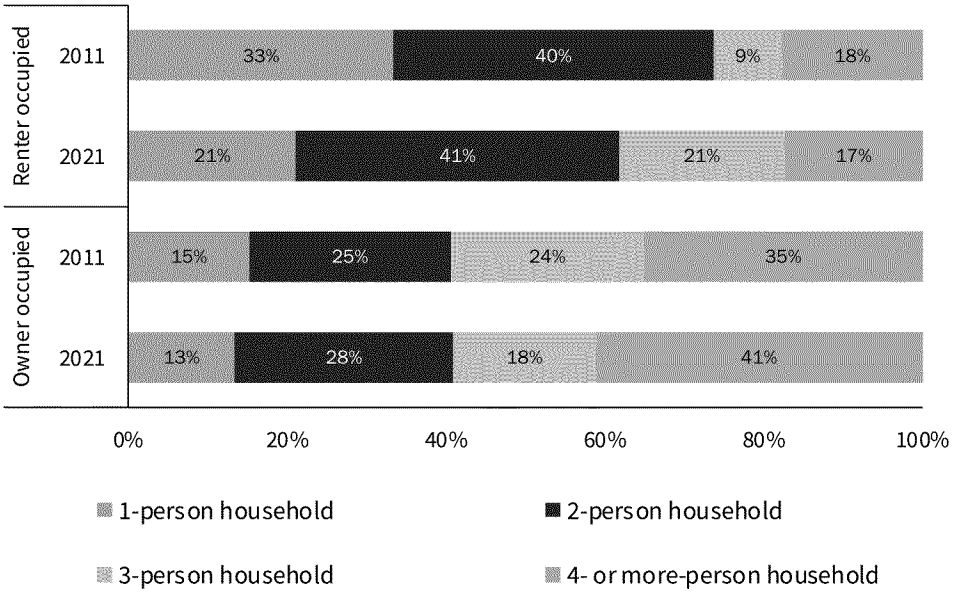
Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



Household size varies widely by tenure in Superior. Renter households make up the majority of 1- and 2-person households (62 percent), while owner households make up the majority of 3- and 4-person households. These household size trends generally track with the trends of the available housing within a community. For example, 1- and 2-person households generally tend to live in apartments while family-sized households tend to live in single-family homes or larger-sized units that accommodate their needs.

Exhibit 15. Household Size by Tenure, Superior, 2011 and 2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates

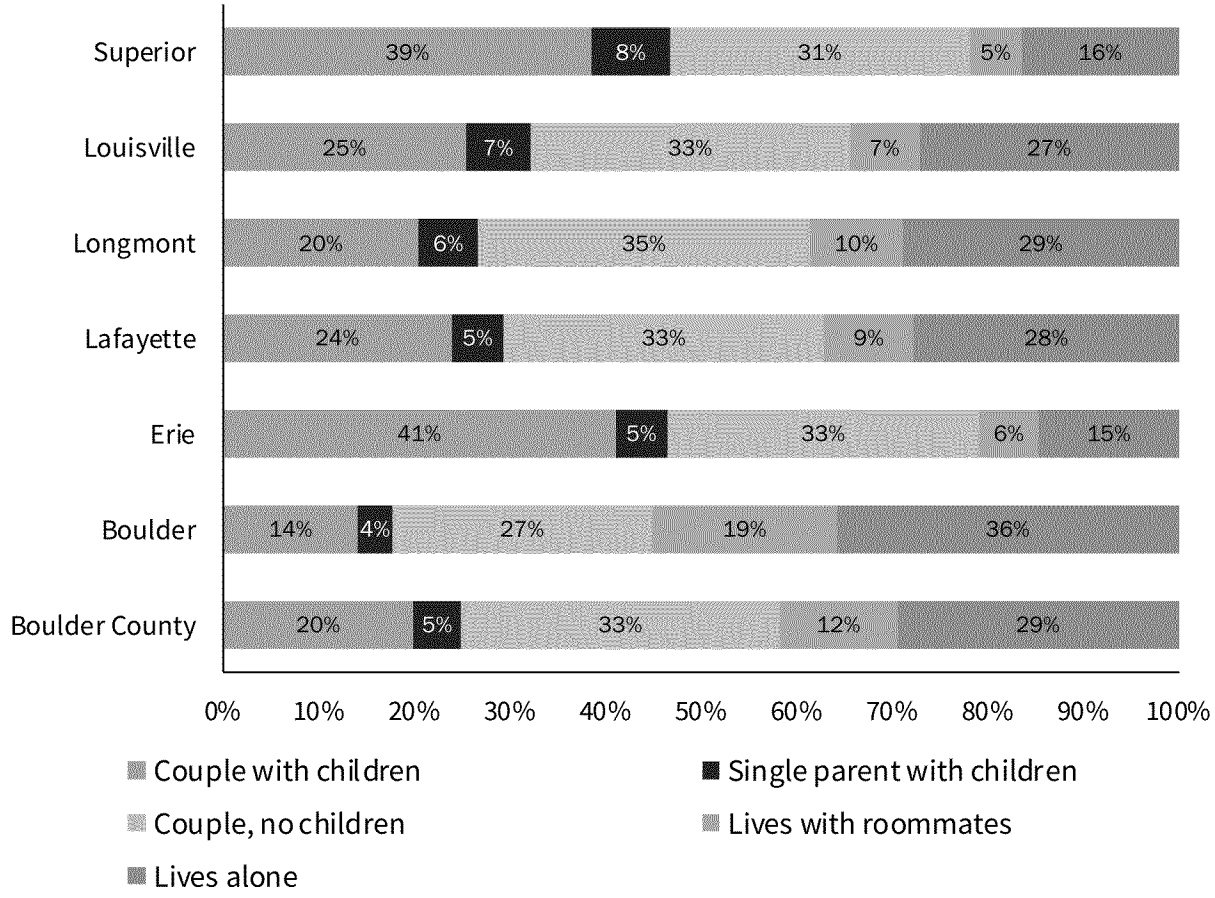


3.1.4 Living Arrangement

Exhibit 16 below shows trends in the living arrangement of Superior households. The majority of Superior households (39 percent) are comprised of a traditional nuclear family consisting of a married couple and their children. The second-largest household type in Superior is couples living together with no children. These trends further strengthen that Superior households are mostly families with children. One-person households make up the smallest share of households in Superior.

Exhibit 16. Living Arrangement of Households, Superior and Comparison Cities, 2021

Source: American Community Survey (ACS) 2021 5-year estimates



3.1.5 Median Age

Superior	Erie	Lafayette	Longmont	Louisville	Boulder	Boulder County
37	37	39	40	43	37	37

Superior's population is young, with a median age of 37 in 2021. Other jurisdictions like Erie, Boulder, and Boulder County also have a young population, with a median age of 37. Longmont and Louisville have older populations relative to the comparison cities.

3.1.6 Age Distribution

The age characteristics of a community indicate current needs and future trends for housing. Because different age groups have very different housing needs, housing demand correlates to the age of residents. For example, young adult households may choose to occupy apartments, condominiums, and small single-family homes because of affordability, location, and household size/presence of children. Middle-aged adults may prefer larger homes in which to raise families, while seniors may prefer smaller units that have lower costs, less maintenance, and nearby services.

The exhibit below shows the age characteristics of Superior's population. Superior's population generally skews younger. The population under 19 years of age comprises the largest cohort of residents in Superior, followed by adults ages 25 to 44 and 45 to 64, making up 29 and 28 percent of the town's population, respectively. Overall, Superior has maintained a relatively small population of senior adults aged 65 years and older.

In comparison, Boulder County's population skews younger as well with roughly 60 percent of its population spread across those under 19 years old, 20 to 24 years old, and 25 to 44 years old.

Exhibit 17. Age Distribution, Superior and Comparison Cities, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

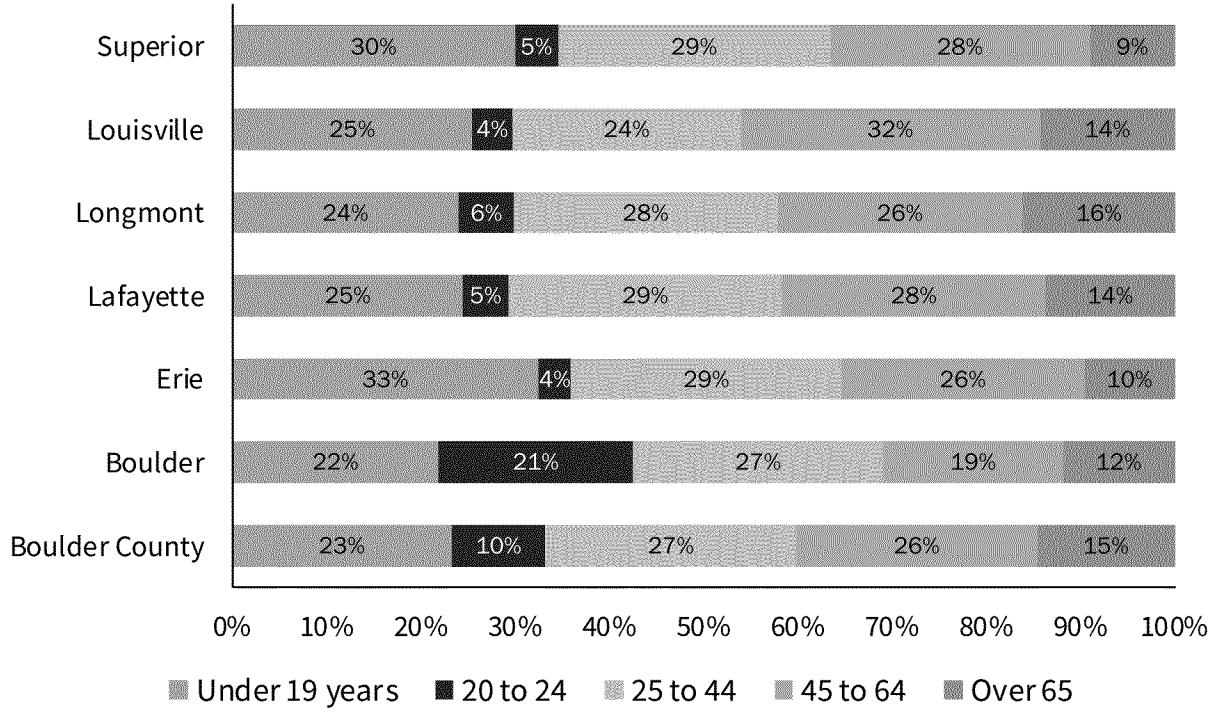


Exhibit 18 below shows how Superior's age distribution has changed over time. Seniors aged 65 years and older experienced the fastest growth since 2011—increasing by 246 percent. This notable increase in the population aged 65 years and older suggests that Superior is experiencing a substantial aging trend. This could be due to factors such as improved health care, an attractive environment for retirees, or seniors who are aging in place. Other notable increases include the age cohort under 19 years old increasing by 10 percent and the age cohort 45 to 64 years old increasing by 25 percent. The 50 percent decline in the 20 to 24 age group could indicate a potential outflow of young adults seeking education, job opportunities, or different living environments. This could also mean that this age group cannot find housing affordable to them in Superior. Boulder County trends for this age group have remained stable between 2011 and 2021.

Exhibit 18. Change in Superior's Age Distribution, 2011-2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates

	2011	2021	2011-2021 Change	
			Number	Percent
Under 19 years	3,616	3,983	367	10%
20 to 24 years	1,200	605	-595	-50%
25 to 44 years	4,092	3,830	-262	-6%
45 to 64 years	2,915	3,656	741	25%
Over 65 years	349	1,209	860	246%

3.1.7 Race and Ethnicity

Most of Superior's population identify as non-Hispanic White. In the past decade, Superior has grown to be more racially and ethnically diverse. Most racial and ethnic groups have increased since 2011. The Black or African American population decreased in the past decade. The Asian population is the second-largest racial group (17 percent), followed by the Hispanic population (9 percent).

Exhibit 19. Race and Ethnicity, 2011 and 2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates

	2011		2021		2011-2021 Change	
	Number	Percent	Number	Percent	Number	Percent
Non-Hispanic White	9,497	78%	9,300	70%	-197	-2%
Black or African American	85	1%	37	0%	-48	-56%
American Indian and Alaska Native	0	0%	86	1%	86	-
Asian	1,501	12%	2,235	17%	734	49%
Native Hawaiian or Pacific Islander	0	0%	9	0%	9	-
Other	0	0%	18	0%	18	-
Two or more races	301	2%	449	3%	148	49%
Hispanic	788	6%	1,149	9%	361	46%

4. Housing Profile and Market Trends

This section summarizes Superior's housing market. It examines housing supply and availability, development trends, and affordability of ownership and rental housing.

A housing profile and housing market analysis are important for understanding housing affordability and demand because they provide valuable information about the current state of the housing market, including the supply of housing units, average cost of rent or homeownership, and demographics of the area, which can help predict future housing demand and need. Projecting future housing need is important to ensure that Superior is planning to provide housing at all income levels for its population—especially those with lower incomes.

For the purposes of this report, unless stated otherwise, the existing supply includes properties impacted by Marshall Fire and the future projections do not include permits and households rebuilding following Marshall Fire. This report assumes these properties rebuild within the 2043 future projected timeline.

Key Findings

Key highlights in Superior's housing profile and market trends include:

The Marshall Fire has further exacerbated the lack of available housing in Superior.

- The Marshall Fire of 2021 destroyed 390 residential properties and 4 commercial properties.
- Superior had a housing vacancy of 2.5 percent in 2021—one of the lowest of the comparison cities of Erie, Lafayette, Louisville, Longmont, and Boulder. For comparison, Boulder County had a housing vacancy of 5.9 percent in 2021.

Superior's housing inventory lacks diversity. Homogeneous new construction is unlikely to support workforce housing needs.

- The majority of housing inventory in Superior is single-family detached (60 percent). Superior has primarily built single-family homes throughout the 2000s and 2010s. Only starting in 2020 did multifamily building permits outnumber single-family permits.
- The share of Superior households who rent increased from 30 percent in 2011 to 40 percent in 2021. This underscores the significance of having rental housing that is both of good quality and reasonably priced.
- Young professional households aged 15 to 34 were the most likely to rent in Superior, while older households 45 to 64 were the least likely to rent.

Incomes have not kept pace with the rising housing costs. Housing attainability in Superior has become challenging for many residents.

- While a household earning 100 percent of the area median income ($144,100) can afford the average rent, they cannot afford to purchase a home at the median price ($724,300). A Superior household would need to make $181,000 or more to afford the median-priced home in 2023. This suggests that higher-income households likely have a better chance of homeownership, while lower and median-income households might be limited to renting.
- The inability of a moderate-income household to afford the median-priced home raises questions about the potential barriers to homeownership in Superior. Factors such as high down payment requirements, stricter mortgage lending criteria, and rising home prices relative to income growth can make it difficult for many households to enter the homeownership market.

- In 2021, about 40 percent of renter households in Superior were considered cost burdened. This means that these households are spending 30 percent or more of their annual income on housing costs.

Increasing the supply of both renter and ownership product units is important for Superior.

- If the demand for housing, particularly for homeownership, exceeds the available supply, it can drive up home prices and make it challenging for households with moderate incomes to purchase a home. Similarly, if the demand for rental housing exceeds the available supply, it can drive up rent prices and price out households that rent in Superior.

4.1 Defining Affordable Housing

Housing affordability refers to the degree to which a household or individual can afford to pay for housing without experiencing financial hardship or sacrificing other essential needs.

According to the U.S. Department of Housing and Urban Development (HUD), affordable housing refers to a residence that a household or family can acquire—either through buying, renting, or other methods—that requires payment of no more than 30% of the household's income. Typically, households paying more than 30 percent of their income for housing are considered cost burdened, while households paying more than 50 percent for housing are considered severely cost burdened.

4.2 Housing Supply

According to the American Community Survey (ACS), Superior had 4,790 housing units as of 2021. Between 2011 and 2021, 193 housing units were added to Superior's housing inventory. These housing units are likely reflected in these developments:

Development	# of Units
Calmante II	33
Coal Creek Crossing	53
Rogers Farm (RM zoned)	27
Downtown/Discovery	80*

**Approximate*

Exhibit 20. Total Housing Units in Superior, 2011 and 2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates

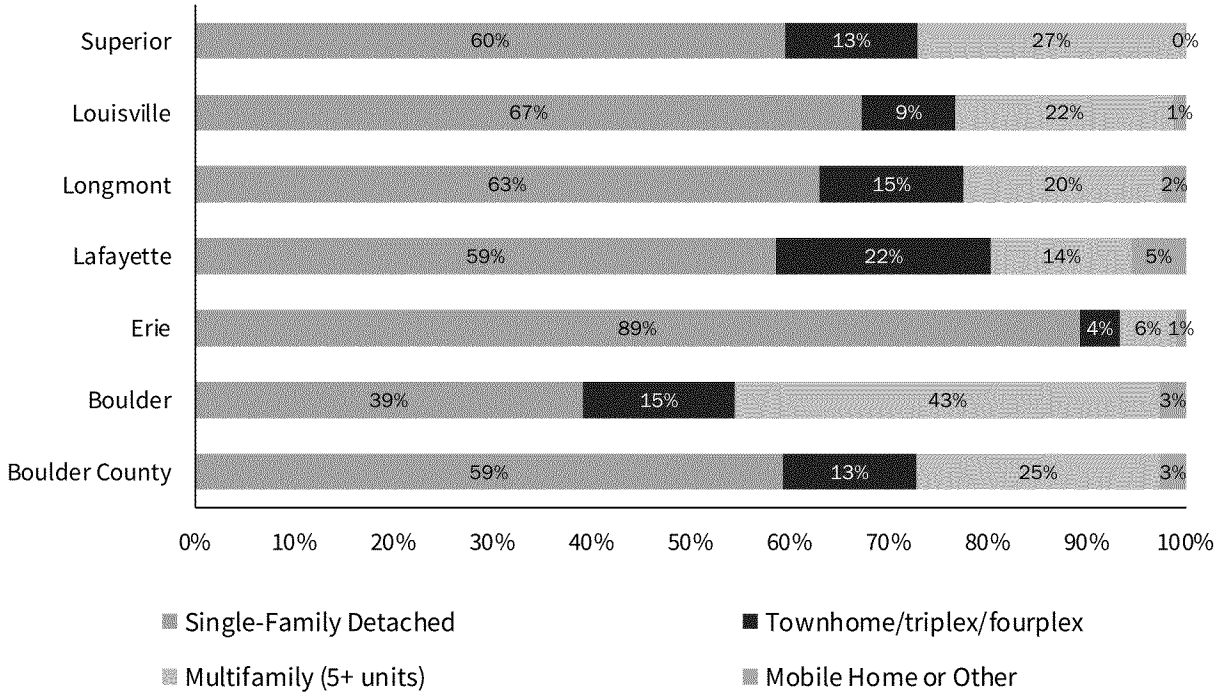
	2011	2021	# Change	AAGR
Housing Units	4,597	4,790	193	0.41%

4.2.1 Existing Housing Inventory by Type

The mix of housing types in Superior is similar to the overall distribution in Boulder County, with 60 percent in the form of single-family detached homes and 13 percent in townhomes and small duplexes, triplexes, and fourplexes. There is a higher share of multifamily units in Superior relative to comparison cities, at 27 percent, second only to Boulder. Less than 1 percent of Superior's housing inventory is mobile homes or other forms.

Exhibit 21. Share of Housing by Building Type, Superior and Comparison Cities, 2021

Source: American Community Survey (ACS) 2021 5-year estimates



4.2.2 Age of Housing Inventory

Housing age can be an important indicator of housing condition within a community. Like any other tangible asset, housing is subject to gradual physical or technological deterioration over time. If not properly and regularly maintained, housing can deteriorate and discourage reinvestment, depress neighboring property values, and eventually impact the quality of life in a neighborhood. Many federal and state programs also use the age of housing as one factor in determining housing rehabilitation needs. Typically, housing over 30 years of age is more likely to have rehabilitation needs that may include new plumbing, roof repairs, foundation work, and other repairs.

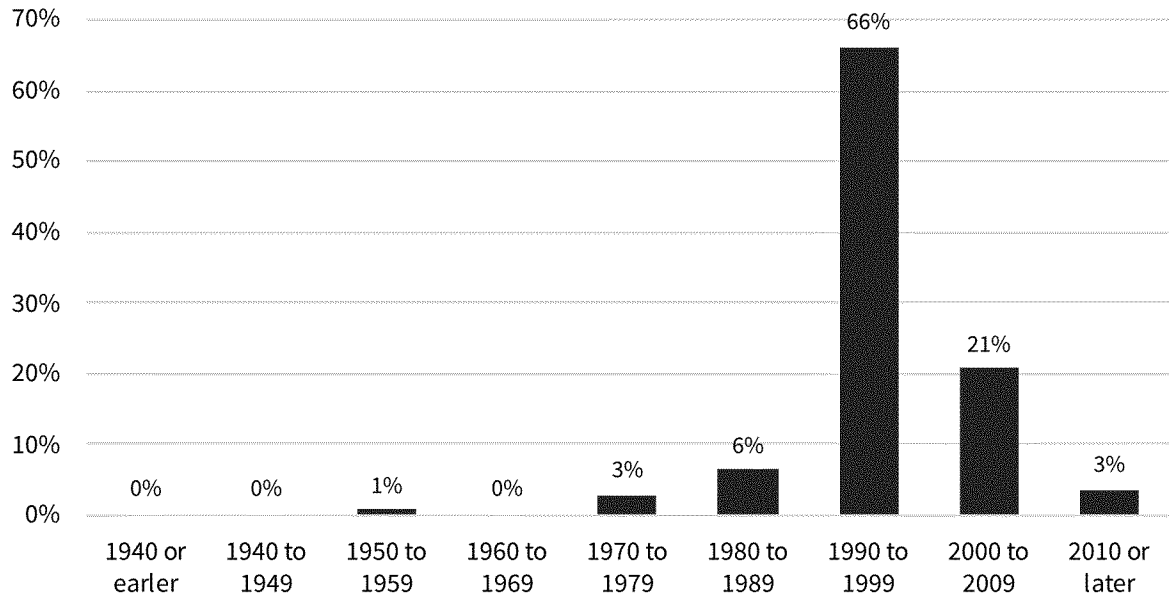
The majority of Superior's current housing units—more than 90 percent—were built in the last 30 years. Most of the housing inventory was built in the 1990s with the development of the Rock Creek Ranch area and expansion of the town boundaries to include the 1,570-acre subdivision.[1] Most of homes older than 30 years were located in Original Town and were destroyed in the Marshall Fire. Units built since 2010 make up a very small share of Superior's

[1] Town of Superior Comprehensive Plan, p. 2–1.

total housing supply. However, the extensive residential construction of Downtown Superior that began in late 2020 is changing the housing makeup of Superior, along with new construction associated with the Marshall Fire recovery. Several new multifamily housing units have been built recently or are under construction, increasing the supply of apartment units and attached housing units.

Exhibit 22. Share of Housing Units by Year Built, Superior, 2021

Source: American Community Survey (ACS) 2021 5-year estimates



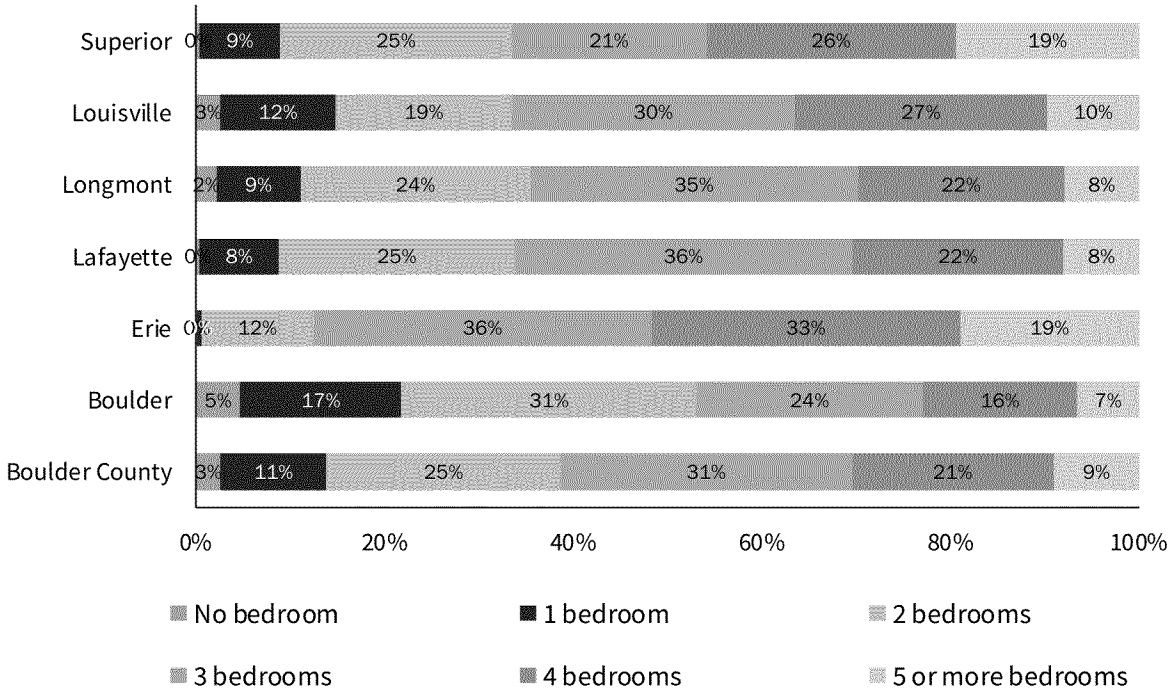
4.2.3 Number of Bedrooms

With single-family detached units as the most common type of housing, it is not surprising that a majority of dwelling units in Superior have three or more bedrooms. A small percentage of Superior's housing stock are studios (no bedroom) or 1-bedrooms. Among comparison cities, Superior has one of the largest shares of homes with five or more bedrooms, at 19 percent. This indicates that most of the single dwelling and multi-dwelling units in Superior are supportive of family households, with a very small share of units supportive for single residents. This limits the pool of units that single households or couples could obtain in Superior's housing market.

Based on recent permit data from the city, the residential market has been building smaller residential units for single households and couples through the development of several studios and 1- and 2-bedroom units.

Exhibit 23. Share of Housing Units by Number of Bedrooms, Superior and Comparison Cities, 2021

Source: American Community Survey (ACS) 2021 5-year estimates



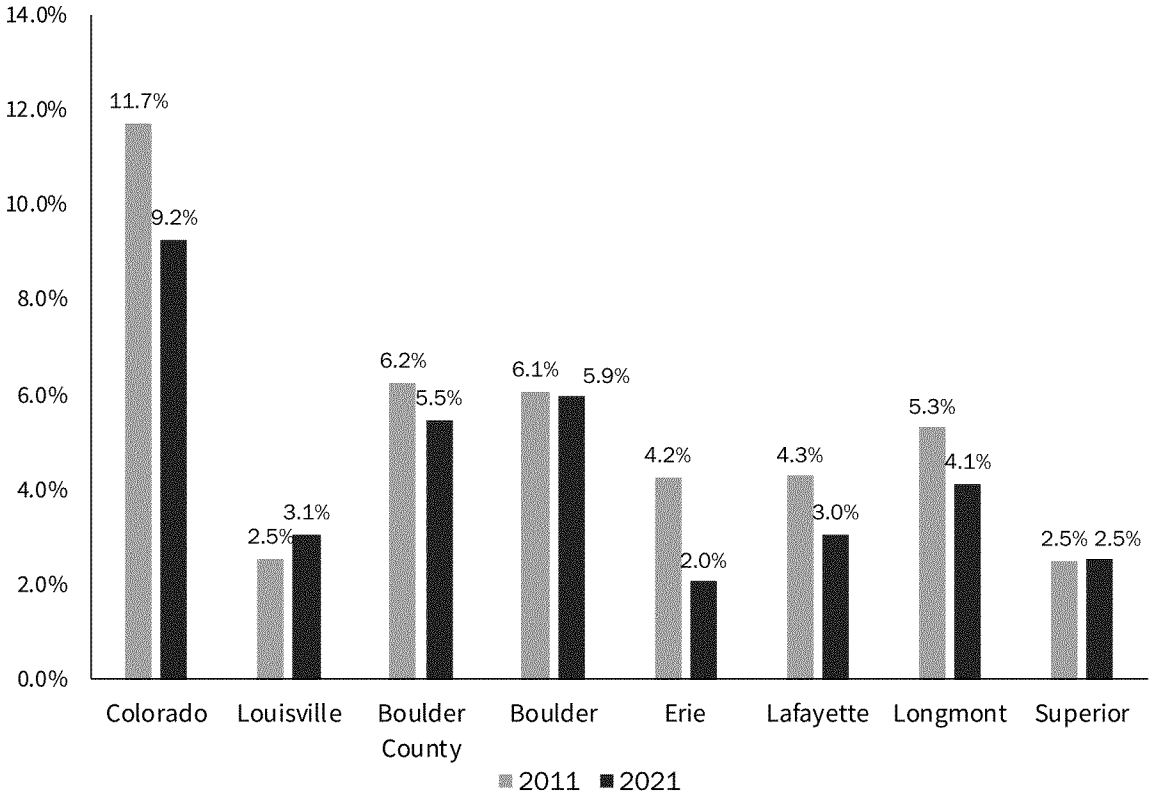
4.2.4 Overall Housing Vacancy, 2011-2021

Vacancy is a measure of the availability of housing units in a given area. When there are more vacant units than there are people looking for a place to live, it can lead to lower rents and other housing costs. This can make housing more affordable for people who are looking for a place to live. On the other hand, when there is a low vacancy rate and high demand for housing, it can lead to higher rents and other housing costs. This can make housing less affordable for people who are looking for a place to live.

Therefore, vacancy rates can have a significant impact on housing affordability in an area. The exhibit below shows vacancy rates for Superior and comparison cities between 2011 and 2021. Superior has one of the lowest overall vacancy rates, at 2.5 percent. Trends in Boulder County show that vacancy rates have mostly declined, suggesting that it is more difficult for households to find an affordable place to live.

Exhibit 24. Housing Vacancy Rate, Superior and Comparison Cities, 2011-2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



4.2.5 Vacant Units by Reason, Superior and Boulder County, 2021

Housing units can be recorded as vacant in the American Community Survey for a variety of reasons. Some vacancies are short term, such as when a unit is listed for rent or sale but not currently occupied. Seasonal (or vacation) homes represent another type of vacancy because they are not occupied year-round.

As shown in the exhibit below, most of the vacant units in Superior are currently listed for rent or are rented but tenants have not yet moved in. A smaller share of vacant units, at 16 percent, are vacation homes or part-time residences. Superior's share of vacation homes is slightly lower than Boulder County, where 20 percent of vacancies are due to seasonal use.

Seasonal, recreational, and occasional-use units collectively refer to housing units that are not consistently occupied by residents but are utilized for specific seasons, occasional purposes, or temporary stays by individuals with their usual place of residence elsewhere.

Exhibit 25. Vacant Units by Reason, Superior and Boulder County, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

	Superior		Boulder County	
Vacancy Reason	Count	Precent	Count	Percent
For rent	44	36%	843	31%
Rented, not occupied	45	37%	538	20%
For sale only	14	11%	219	8%
Sold, not occupied	0	0%	38	1%
For seasonal, recreational, or occasional use	19	16%	540	20%
For migrant workers	0	0%	0	0%
Other vacant	0	0%	516	19%
Total:	122		2,694	

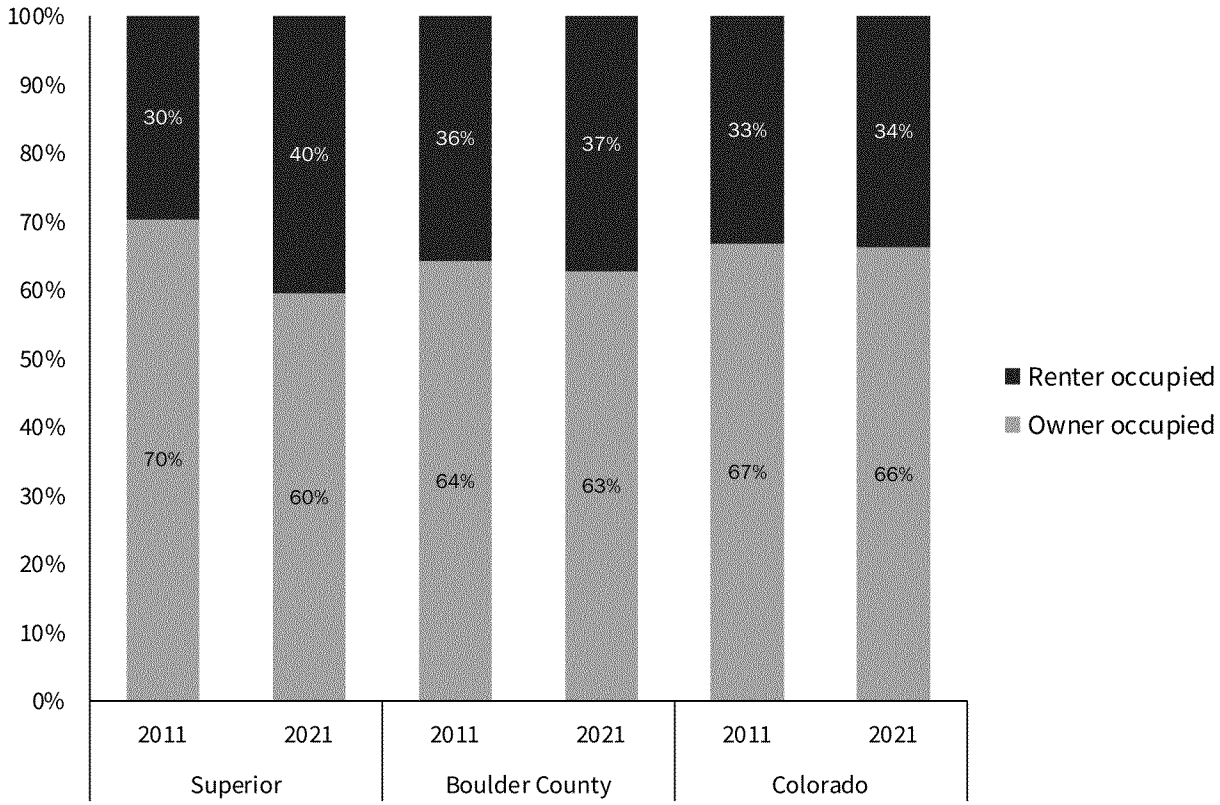
4.2.6 Housing Tenure (Owner vs Renter)

Household tenure is an important component of housing needs, as it helps to determine whether future housing should be built as ownership units or rental units. In many areas, a notable portion of households choose to rent their homes, emphasizing the significance of having rental housing that is both of good quality and reasonably priced.

Most of Superior's housing units are occupied by owners, but the share of owned homes has declined in the past 10 years. The current share of owner-occupied homes in Superior (60 percent) is similar to the share in Boulder County (63 percent). As of 2021, 40 percent of households in Superior were renters, higher than the renter percentage in Colorado (34 percent) and Boulder County (37 percent). The share of Superior households who rent increased from 30 percent in 2011 to 40 percent in 2021.

Exhibit 26. Housing Tenure, Superior and Boulder County, 2011-2021

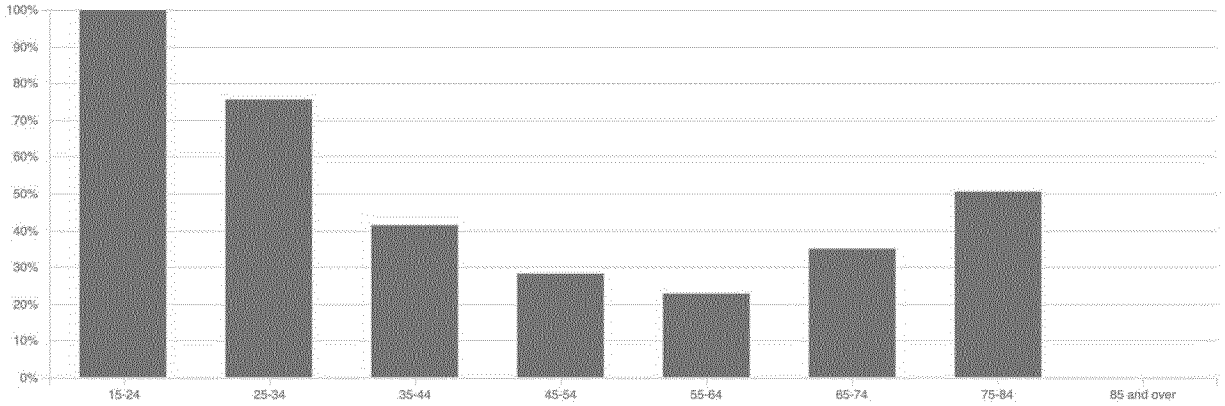
Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



The share of households who rent varies substantially by age; therefore, renters of different ages and household sizes may be interested in different forms and sizes of rental homes. In Superior, as of 2021, households headed by an individual aged 15 to 34 were the most likely to rent. While households headed by an individual aged 55 to 64 were the least likely to rent.

Exhibit 27. Share of Renter by Age, 2021

Source: American Community Survey (ACS) 2021 5-year estimates



4.3 Apartment Rental Market

The exhibit below shows a snapshot of Superior and Boulder County's apartment rental market. As of 2023 Q2, Superior had approximately 1,210 apartment rental units in one multibuilding complex. Boulder County had 28,406 apartment units in 708 buildings. Additionally, there are 504 apartment units in the pipeline or under construction in Superior, with an additional 1,753 units under construction elsewhere in Boulder County. The average rent per unit in Superior is $2,406 or $2.38 per square foot, which exceeds the County average rent per unit of $1,917 or $2.25 per square foot.

Exhibit 28. Superior and Boulder County Apartment Rental Market Snapshot, 2023

Source: CoStar

	Inventory (buildings)	Units	Inventory Avg. SF	Under Construction	Avg. Rent per SF	Avg. Rent per Unit	Vacancy Rate
Superior	1*	1,209	1,028	504	$2.37	$2,392	7.7%
Boulder County	708	28,406	847	2,257	$2.24	$1,906	5.7%

* This project is a large multibuilding complex owned by a single entity.

According to CoStar, the apartment rental market in Superior was relatively stable with an overall vacancy rate of 7.7 percent as of 2023 Q2, as shown in exhibit 29. By comparison, Boulder County had a tighter housing market, with a vacancy rate of 5.7 percent. Since 2013,

Superior's apartment market has seen growth of 74 percent ($1.01 per square foot), which has outpaced Boulder County's rent growth of 52 percent ($0.77 per square foot).

Exhibit 29. Apartment Rent per Square Foot and Vacancy Rate, Superior and Boulder County, 2013–2023 Q2

Source: CoStar

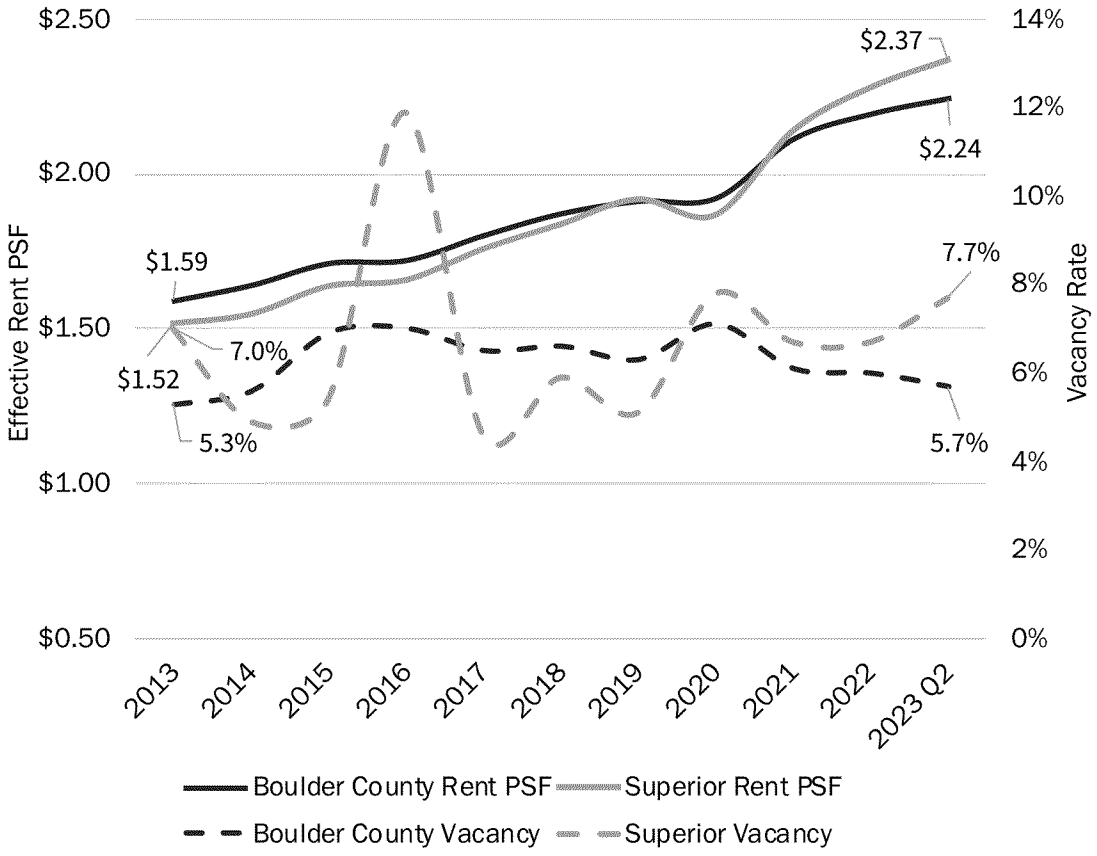


Exhibit 30 shows apartment deliveries and net absorption in Superior. Apartment deliveries refer to the new units built in the market, while net absorption refers to the difference between the number of units leased and the number of units vacated during a specific period. Since 2013, there have been no new multifamily apartment units completed in Superior's market.

Exhibit 31 shows apartment deliveries and net absorption in Boulder County overall. Since 2013, Boulder County has seen a delivery of 8,365 units and a net absorption of 7,779 units. New units delivered seem to be absorbed (leased up) by the market quickly, indicating a strong demand for apartments in the County.

Exhibit 30. Apartment Deliveries and Net Absorption, Superior, 2013-2023 Q2

Source: CoStar

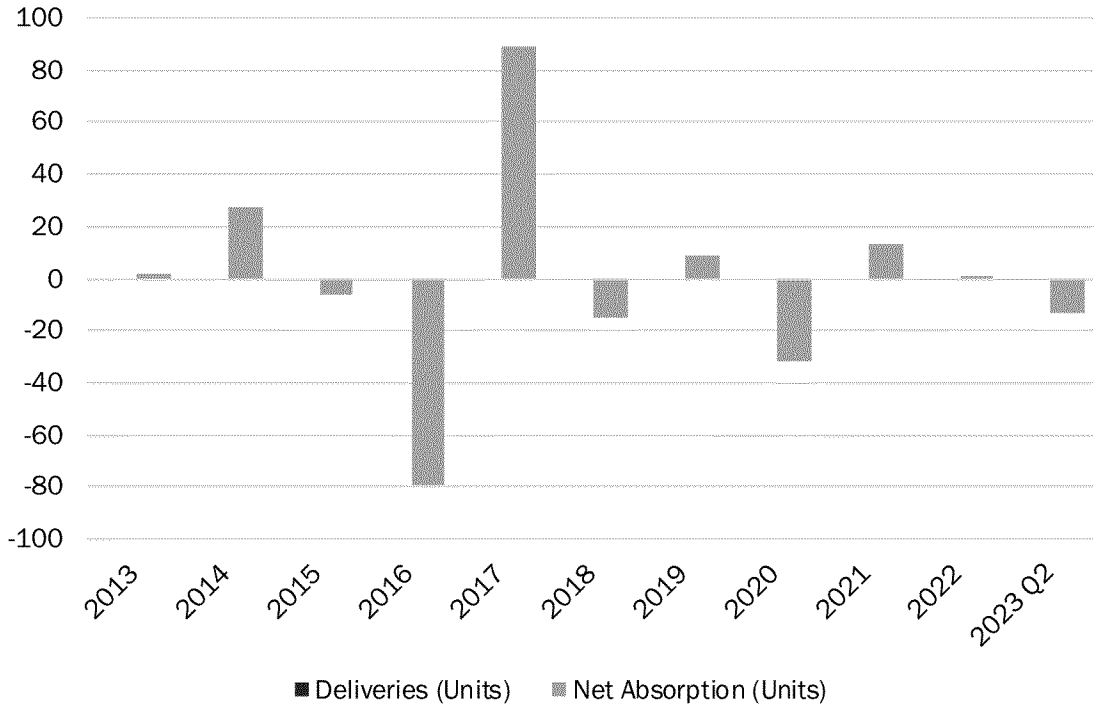
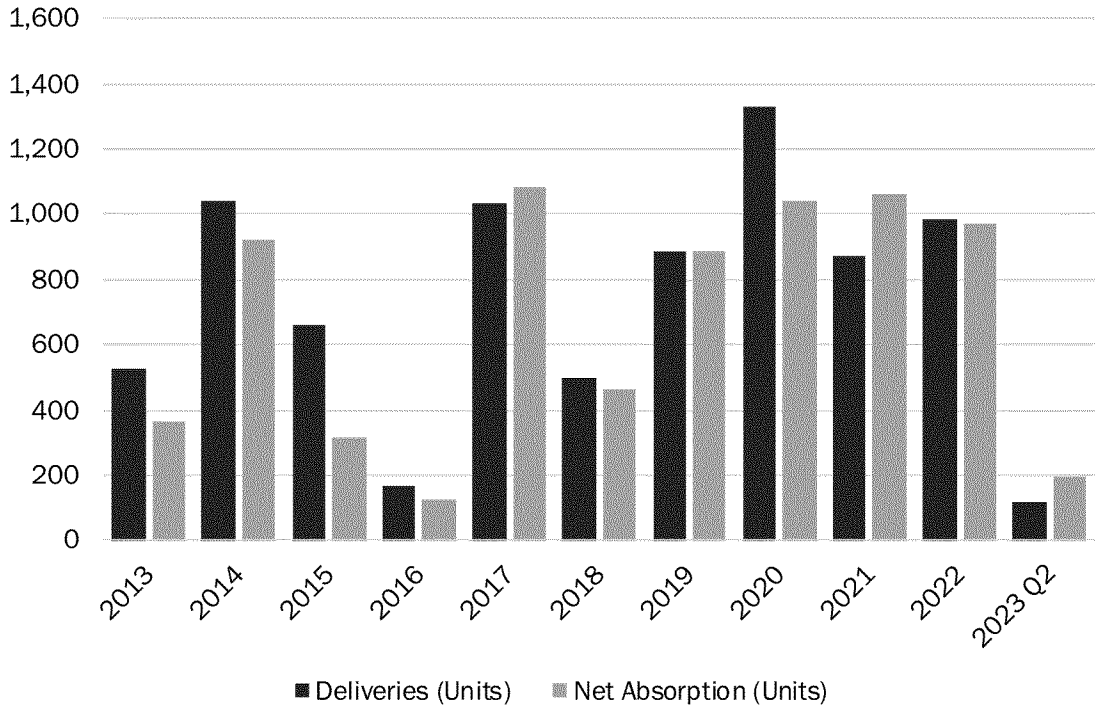


Exhibit 31. Apartment Deliveries and Net Absorption, Boulder County, 2013-2023 Q2

Source: CoStar



4.4 Housing Production

A community's housing stock is defined as the collection of all housing units located within the jurisdiction. The production of houses, including types of housing built as well as the incorporation of subsidized affordable housing, is an important factor in addressing the housing need of the community. This section details the housing stock characteristics of Superior to identify how well the current housing stock meets the needs of the current and future residents of the Town.

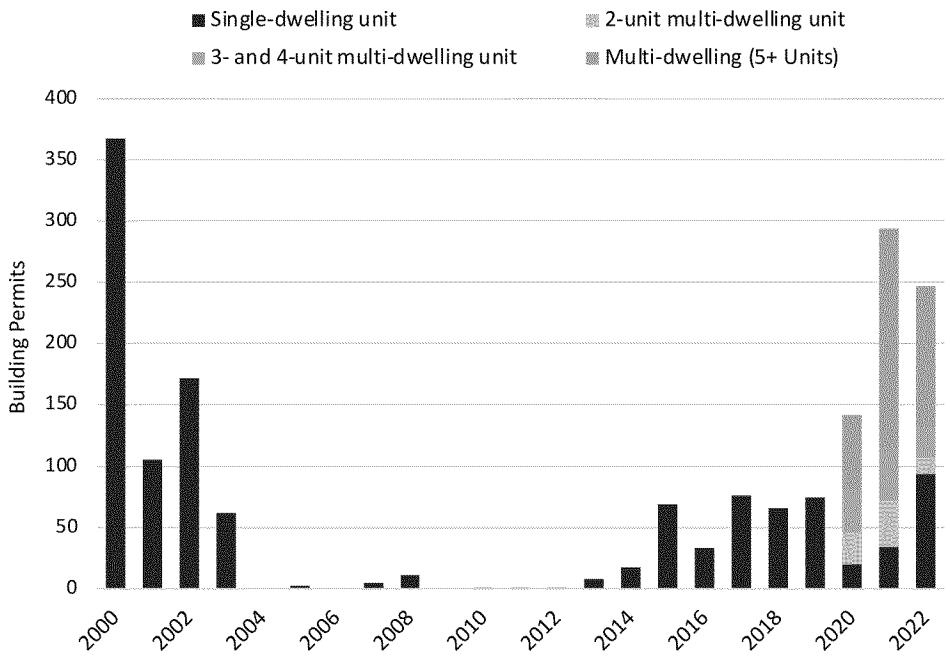
4.4.1 Building Permits

Exhibit 32 shows trends in residential building permits. For the past 20 years, single-dwelling units have been the dominant type of housing permitted in Superior, but as of 2020, permits for small duplex, triplex, fourplex, and apartment units outpaced single dwellings.

Development trends show that Superior's housing market experienced decline before the 2008 Great Recession and was slow to recover. Residential permitting has grown rapidly since 2020, driven by the development of Downtown Superior. Despite this increase, the pace of permitting has not reached the level seen in 2000 when 367 permits were approved.

Exhibit 32. Building Permits in Superior, 2000-2022

Source: HUD SOCDS Building Permits Database



The following table outlines the number and type of housing units added to the Town of Superior following the 2021 ACS total. The table includes units that are complete, under construction, or able to pull a building permit.

Development	# of Units	Unit Type
Lanterns Lane	62	Duplex
Rogers Farm (Wee Cottages)	55	Small Lot Single-Family
Superior Shores	94	Townhomes
Downtown	972*	Mix of Single-Family, Townhomes, Apartments
Total	1,183	

**1,052 approved to date, assumed 80 units complete within pre-2021 totals*

4.5 Unregulated and Subsidized Affordable Housing

An important component of any community's housing inventory is the stock of housing that is affordable to households earning lower incomes. This housing can be regulated or unregulated and is most often rental housing.

Unregulated affordable housing is affordable to lower-income households by virtue of its location, age, condition, or amenities. Typically, unregulated affordable housing units are older, smaller, and/or lower quality with fewer amenities, older appliances, or older appearances. These properties often have some deferred maintenance or capital needs. Because there is not enough regulated affordable housing across the country, unregulated housing is an important part of the housing stock in a community. But because it is unregulated, the rents charged at the properties can change suddenly and can be influenced by the larger real estate market. In addition, these properties can sometimes have habitability issues if they are not well maintained by the landlord.

Regulated affordable housing often has public funding that restricts the maximum incomes of the tenants or restricts the rents that can be charged to ensure that the housing is serving low-income households. This housing is sometimes referred to as government-assisted housing, referencing the public funds at the property. These restrictions vary by the type of funding and the affordability level at the property and typically have a limited duration that the property is affordable for a specified period. Generally, there are two types of housing programs in the United States that provide regulated affordable housing to cities: the Low-

Income Housing Tax Credit (LIHTC) program and Section 8 vouchers. These programs provide much-needed affordable housing to low-income residents. In the following sections, we summarize the inventory of regulated affordable housing units in Superior.

4.5.1 Low-Income Housing Tax Credit (LIHTC)

According to HUD's LIHTC database, Superior does not have any LIHTC housing. In the next section we discuss the other subsidized program available in Superior.

4.5.2 Section 8 Vouchers

According to Boulder County Housing Authority, 7 households in Superior received voucher assistance to help cover their rental housing costs.

4.6 Housing Cost

Housing cost has a direct relationship to housing accessibility for all economic segments of the community. In general, if housing supply exceeds housing demand, housing prices will decrease. If housing demand exceeds housing supply, housing prices typically increase. The availability of housing—which is measured by vacancy rates—can also affect housing cost.

Between 2012 and 2023, housing prices have significantly increased in Superior and across the region. Exhibit 33 below shows the median home sale price in Superior and a few comparison cities. The median home sale price in Superior increased from $359,000 in 2012 to $724,000 in Q1 2023, roughly a 100% increase. Since 2012, Superior's housing market increased at a similar rate in relation to the other comparison cities. The Marshall Fire of 2021, in its most recent impact, led to a surge in housing demand, subsequently causing an uptick in median home sale prices. However, Downtown Superior, having erected approximately 1,000 residential units after the fire, has mitigated the heightened housing demand, resulting in a modest decrease in prices.

Exhibit 33. Median Home Sale Price, Superior and Comparison Cities, 2012-2023

Source: Redfin

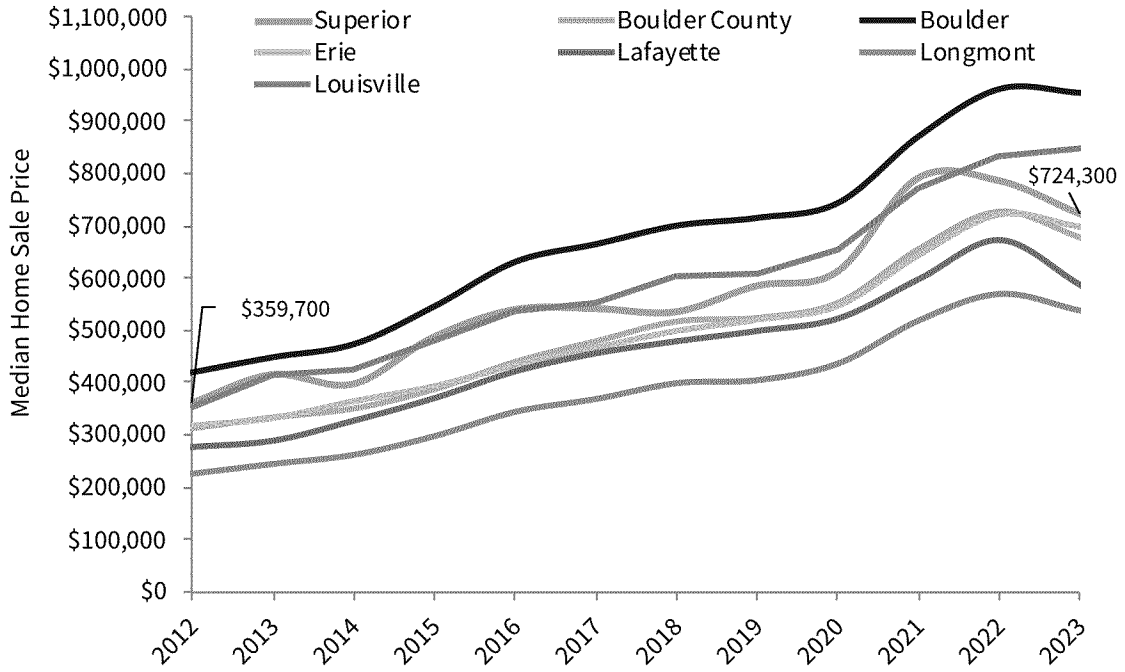


Exhibit 34 shows that the median sale price of a home has increased in all comparison cities since 2012, with the most significant increase in Louisville (139 percent), followed by Longmont (137 percent) and Boulder (127 percent). Compared to the comparison cities, Superior's housing market experienced the lowest change at 101 percent (or $364,600).

Exhibit 34. Change in Median Home Sale Price, Superior and Comparison Cities, 2012-2023

Source: Redfin
Note: Median home sale price information on Redfin was only available from 2012 onward.

Jurisdiction	2012	2023	Change (2012-2023)	
			Number	Percent
Superior	$359,700	$724,300	$364,600	101%
Louisville	$355,725	$850,000	$494,275	139%
Longmont	$228,025	$540,000	$311,975	137%
Lafayette	$276,200	$586,250	$310,050	112%
Erie	$318,175	$698,495	$380,320	120%
Boulder	$421,125	$955,000	$533,875	127%
Boulder County	$311,750	$680,000	$368,250	118%

Between 2011 and 2021, the median rent increased by 69 percent while the median household income increased by 32 percent. During this same period, the median home sale prices increased 353 percent. These trends suggest that incomes have not kept pace with the rising rents and home sale prices in Superior.

Exhibit 35. Change in Housing Costs and Median Household Income, Superior, 2011-2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates, Redfin, ECONorthwest Calculations

	2011	2021	2011-2021 Change	
			Number	Percent
Median Rent	$1,283	$2,162	$879	69%
Median Home Sale Price	$175,000	$792,000	$617,000	353%
Median Household Income (unadjusted for inflation)	$100,194	$131,757	$31,563	32%

5. Housing Attainability

5.1 Cost Burden

State and federal standards specify that households spending more than 30% of gross annual income on housing experience a housing cost burden. Housing cost burden can occur when housing costs increase faster than household income. When a household spends more than 30% of its income on housing costs, households have less disposable income for other necessities, including health care, food, and clothing. In the event of unexpected circumstances such as the loss of employment or serious health problems, lower-income households with a burdensome housing cost are more likely to become homeless or be forced to double up with other households. Homeowners with a housing cost burden have the option of selling their homes and becoming renters. Renters, on the other hand, are more vulnerable and subject to constant changes in the housing market.

Exhibit 36 below shows housing cost burden for owner and renter households. In 2021, Superior renter households tended to be more cost burdened and severely cost burdened than owner households. About 26 percent of Superior renter households were cost burdened, while 14 percent were severely cost burdened. Housing affordability conditions for renter households in the County were more severe when compared to Superior. In Boulder County, 25 percent of renter households were cost burdened while 32 percent were severely cost burdened. In Boulder County specifically, several renter households had challenges with housing affordability and several were paying more than half of their annual income on housing costs.

Exhibit 36. Cost Burden by Tenure, Superior and Boulder County, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

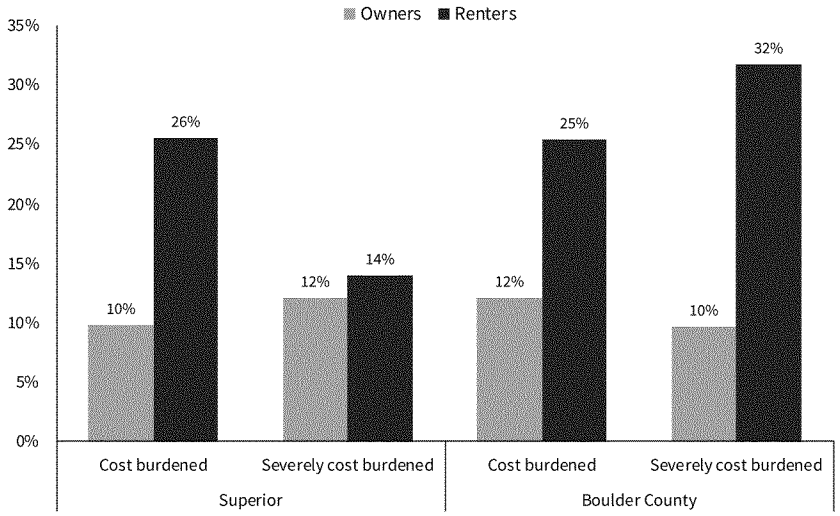
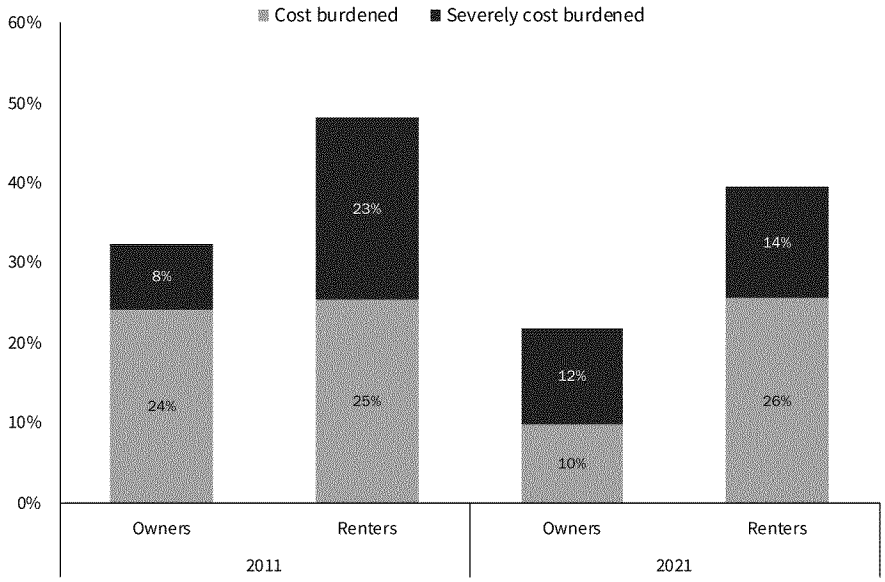


Exhibit 37 below shows how cost burden has changed over time in Superior. Generally, in 2021, fewer households in Superior were cost burdened compared to 2011. However, renter households remained the most susceptible to changing market conditions and were the most cost burdened in 2021. The fact that housing costs have outpaced household income growth can suggest increasing income inequality within Superior. Households with higher incomes may be able to cope better with rising housing costs, while those with lower incomes are more severely affected, potentially leading to an unequal access to housing that is affordable to them.

Exhibit 37. Change in Cost Burden by Tenure, Superior, 2011 and 2021

Source: American Community Survey (ACS) 2021 5-year estimates



5.2 Housing Attainability

Exhibit 38 shows the average rent and median home sale price in Superior in Q1 2023. With an average rent of $2,416 (for all homes and apartments), a household would have to make $96,940 or more to afford the average rent in Superior without being cost burdened. In comparison, with a median home sale price of $724,300, a household would have to make $181,000 or more to comfortably afford the median home price in Superior.

Exhibit 38. Average Rent and Median Sale Price in Superior and Related Affordability, Q1 2023

Source: Redfin, Zillow, ECONorthwest Calculations

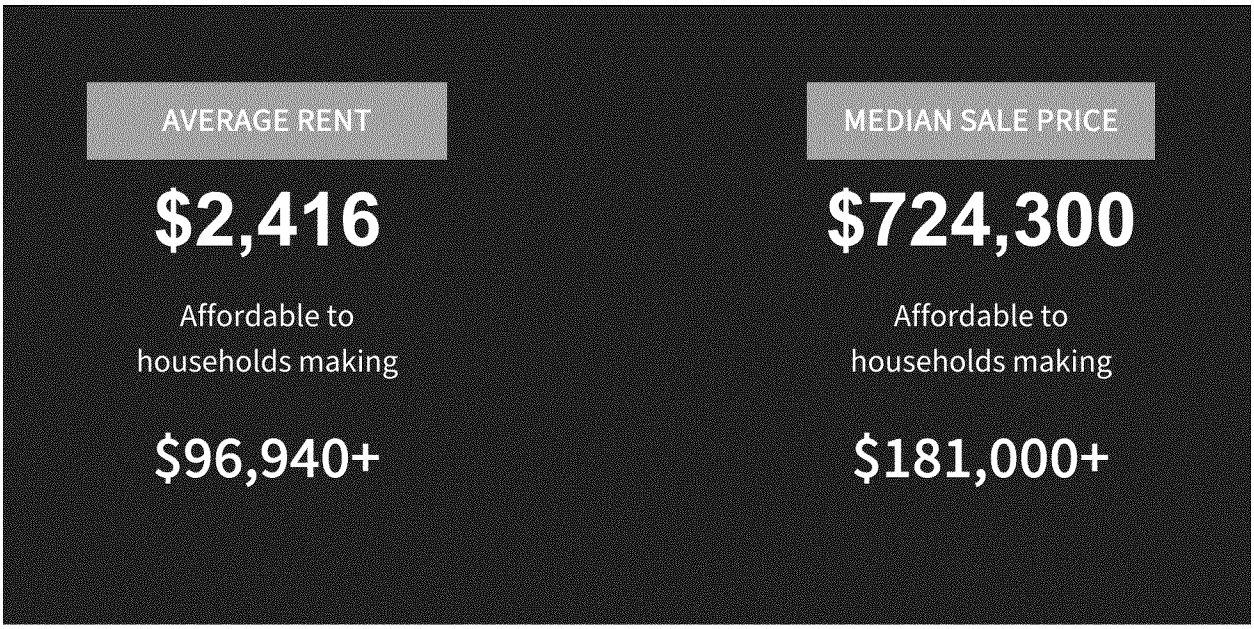


Exhibit 39 below illustrates housing affordability and the attainable monthly rent and home sale price based on household income. The median income for a family of four in Boulder County in 2023 is $144,100 (100% of area median income); this figure is based on HUD's calculation for Boulder County.

The estimates presented in Exhibit 39 are based on income and affordability ratios that lending banks typically use. They do not consider other household financial characteristics that can affect ability to pay for housing—other debt such as auto loans and credit cards as well as accumulated assets. A key challenge many lower-income households face is competition for affordable housing from higher-income households. It is rational for higher-income households to choose less-expensive housing if it is available and meets household needs.[2] Given entry costs (down payment for owner units, advance rent, and deposits for rental units) and required credit reports, lower-income households have clear disadvantages in competing for lower-cost housing.

Based on the information above about the average rent and median home prices in Superior, a household earning 100 percent of the area median income (AMI) in 2023 could not afford to purchase the median-priced home in Superior. However, this household could afford the

[2] https://www.strongtowns.org/journal/2021/4/27/are-new-homes-mostly-luxury-does-it-matter-if-they-are

average rent in Superior. This highlights four key takeaways playing out in Superior's dynamic housing market:

- **Superior has an income disparity.** While a household earning 100 percent of the area median income can afford the average rent, they cannot afford to purchase a home at the median price. This suggests that higher-income households likely have a better chance of homeownership, while lower- and median-income households might be limited to renting.
- **Potential barriers to homeownership exist.** The inability of a moderate-income household to afford the median-priced home raises questions about the potential barriers to homeownership in Superior. Factors such as high down payment requirements, stricter mortgage lending criteria, and rising home prices relative to income growth can make it difficult for many households to enter the homeownership market.
- **Increasing the supply of both renter and ownership product units is important** for Superior in the long term. If the demand for housing, particularly for homeownership, exceeds the available supply, it can drive up home prices and make it challenging for households with moderate incomes to purchase a home. Similarly, if the demand for rental housing exceeds the available supply, it can drive up rent prices and price out households that rent in Superior.

Exhibit 39. Housing Affordability in Boulder County for a Family of Four, 2023

Source: HUD, ECONorthwest Calculations

If your household earns:				
$43,200	**$86,500**	**$115,300**	**$144,100**	**$172,900**
30% of AMI	*60% of AMI*	*80% of AMI*	*100% of AMI*	*120% of AMI*
Then they can afford:				
$1,080 **Monthly Rent** **OR**	$2,160 **Monthly Rent** **OR** $260,000-$303,000 **Home Sale Price**	$2,880 **Monthly Rent** **OR** $404,000-$461,000 **Home Sale Price**	$3,600 **Monthly Rent** **OR** $504,000-$576,000 **Home Sale Price**	$4,320 **Monthly Rent** **OR** $605,000-$692,000 **Home Sale Price**
Related Occupation:				
Construction Worker	**Web Developer**	**Chemical Engineer**	**Data Scientist**	**HR Manager**
$43,290/ $20.81 hr	*$86,120/ $41.41 hr*	*$116,580/ $56.60 hr*	*$141,740/ $68.14 hr*	*$175,350/ $84.31 hr*

5.3 Worker Affordability

The exhibit below shows the average wages by industry in Boulder County and the maximum rent and median home price that workers in each industry could afford.

Only a select few industries in Boulder County have high enough wages that can afford the average rent of $2,416 in Superior. No industry has a high enough wage for a single earner to afford the median home price of $724,300 in Superior. Superior's employment is concentrated in the service sector and education industry. Based on the average wages earned in Boulder County in 2021, select workers in the services sector can afford the average rent but not the median-priced home. Workers in the education industry would typically not be able to afford the average rent or median-priced home in Superior.

A select number of industry professionals can afford the median-priced home in Superior, but only if they earn 1.5 times the industry wage per household. These jobs mostly fall under the services sector and those in utilities and wholesale trade.

Exhibit 40. Housing Affordability in Boulder County by Industry and Wages, 2021

Source: BLS, ECONorthwest Calculations

Industry	Annual Average Wage	Max Affordable Rent	Can Afford the Average Rent	Max Affordable Home Price	Can Afford Median Home Price in Superior	Can Afford Median Home Price with 1.5 Earners per household?
Agriculture, forestry, fishing, and hunting	$48,344	$1,209	No	$181,426	No	No
Mining, quarrying, and oil and gas extraction	$92,097	$2,302	No	$345,623	No	No
Utilities	$122,413	$3,060	Yes	$459,393	No	Yes
Construction	$67,538	$1,688	No	$253,457	No	No
Manufacturing	$96,587	$2,415	No	$362,473	No	No
Wholesale trade	$127,856	$3,196	Yes	$479,819	No	Yes
Retail trade	$40,551	$1,014	No	$152,180	No	No
Transportation and warehousing	$51,346	$1,284	No	$192,692	No	No
Information	$177,255	$4,431	Yes	$665,205	No	Yes
Finance and insurance	$143,372	$3,584	Yes	$538,048	No	Yes
Real estate and rental and leasing	$69,937	$1,748	No	$262,460	No	No
Professional, scientific, and technical services	$135,799	$3,395	Yes	$509,628	No	Yes
Management of companies and enterprises	$151,476	$3,787	Yes	$568,461	No	Yes
Administrative and support and waste management and remediation services	$51,675	$1,292	No	$193,927	No	No
Educational services	$48,225	$1,206	No	$180,979	No	No
Health care and social assistance	$61,078	$1,527	No	$229,214	No	No

Arts, entertainment, and recreation	$32,796	$820	No	$123,077	No	No
Accommodation and food services	$27,305	$683	No	$102,471	No	No
Other services (except public administration)	$49,621	$1,241	No	$186,218	No	No

5.4 Housing Affordability and Transportation Costs

Traditional measures of housing affordability ignore transportation costs, although transportation typically represents a household's second-largest expenditure. These costs are heavily influenced by the location of where a household lives relative to their place of work. When people live farther from job centers and places of work, less reliable alternatives exist, so households typically need to own a vehicle to make their daily trips.

In Superior, 2,462 people commute into the town for work, while 5,846 people commute out of Superior for work. The majority of Superior residents (66 percent) commute alone by car, 9 percent carpool, 3 percent use public transit, and 22 percent work from home. These commuting characteristics and auto dependency indicate that transportation costs may impact Superior households' ability to pay for housing and other household essentials.

According to the Center for Neighborhood Technology, which analyzes housing and transportation costs, an average Superior household spends 51 percent of their annual income on housing and transportation costs (33 percent for housing and 18 percent for transportation). A typical Superior household spends $14,584 annually on transportation costs and owns 1.88 vehicles per household. According to the Center for Neighborhood Technology, transportation costs are considered affordable if they are 15 percent or less of household income, or $12,453 per year. This suggests that Superior residents typically spend more on transportation costs than the average US household.

5.5 Homelessness

Data from the Metro Denver Homeless Initiative (MDHI) shows increases in homelessness in Boulder County. In 2023, MDHI counted 839 unhoused people living in Boulder County, a notable increase from previous counts and confirmation that homelessness is rising across Boulder County and the Denver metro region. Of the 839 people experiencing homelessness, 596 people were in emergency shelters, transitional housing, or safe haven programs. The other 243 people counted were sleeping unsheltered on the streets or another place not meant for human habitation. The data represents a snapshot in time that can vary due to

several factors such as weather conditions, methodology, and the participation of volunteers conducting the tallies.

Although there is no specific data that shows the number of unhoused individuals living in Superior, providing shelter and homeless preventive programs and resources is important toward providing the gamut of the housing spectrum.

In addition, Superior does not have a shelter in the Town and all individuals or families experiencing homelessness would need to go through Boulder County's Coordinated Entry. The Coordinated Entry is the first stop and key element of the adult homeless service system, which all individuals need to go through to identify the help they need.

6. Marshall Fire Recovery

In December 2021, the Marshall Fire in Boulder County grew out of several small wildfires, developing into a single large wildfire spanning roughly 6,000 acres that destroyed homes and businesses in Superior and Louisville. The fire destroyed 394 properties in Superior. The majority were residential properties (390 in total), and four commercial properties were destroyed. Roughly 8 percent of Superior's housing stock was destroyed during the Marshall Fire—further limiting the number of housing units available in Superior.

Since the fire, the Town of Superior's top priority has been helping residents with their recovery process. The Town created a web page and dashboard tracking the recovery efforts. As of August 2023, 394 lots have been cleared while 236 building permits have been issued and 37 building permits are pending. About 76 residential families have been able to move back into their neighborhood and 2 commercial buildings have been reopened. To help families rebuild, the Town has offered building permit and plan fee rebates to help reduce the costs of rebuilding. In total, as of August 2023, the Town has issued more than $2.5 million in rebates to families wanting to rebuild.

In March 2023, Louisville and Superior sponsored a Marshall Fire Recovery Advisory Panel by the Urban Land Institute (ULI). This panel provided feedback and recommendations for rebuilding housing and climate resilience, including:

- **Affordable homeownership options:** The Panel found that new construction in Louisville and Superior is priced above what many households in the area could afford and was exacerbated by the loss of housing in the fire. Particularly for "workforce" households, first-time homebuyers, and seniors, many new homeownership products (especially single-family detached homes) are unattainable. The Panel found that

there are opportunities to develop more "missing middle housing" to offer more attainable homeownership opportunities, including developing deed-restricted housing, subdividing existing lots, and supporting the development of accessory dwelling units. In addition, the Panel recommended cities consider implementing developer incentives for missing middle housing, purchase sites for infill housing, and offer first-time homeowner financial assistance.

- **Limited rental opportunities:** The Panel found that the loss of housing further constrained an already limited rental stock in the area, leading to rental price gouging. Particularly for lower-income residents, there is inadequate attainable rental stock in the areas. To address renter housing needs, the Panel recommended that cities implement developer incentives for building rental housing, as well as a disaster-related rental housing voucher program for displaced renters.
- **Data availability:** The Panel found there is a lack of data on the socioeconomic characteristics of the displaced neighborhoods following the fire. The Panel recommended cities consult findings from the Marshall Fire Unified Survey Team to better understand the affected residents' needs and tailor rebuilding strategies accordingly.

Initial findings from the Marshall Fire Unified Survey Team revealed disparities in insurance coverage and rebuilding progress across income levels. The survey team found that underinsurance was a significant obstacle for many affected households, with only a small percentage of respondents' expecting insurance coverage to fully meet their rebuilding costs. The extent of expected insurance coverage correlated with income levels, with higher-income households anticipating higher payouts. This correlation was also reflected in the progress of rebuilding, as those expecting higher insurance coverage were more likely to have received building permits after one year compared to those with lower coverage expectations. This inequity can exacerbate existing inequalities during the rebuilding process, and the survey team recommends the City prioritize programs that offer rebuilding assistance to households with fewer resources.

7. Population Forecast

One way to to understand the forecast of future housing demand in Superior is to consider county-level population forecasts from the Department of Local Affairs (DOLA) State Demography Office. In the next 20 years, Boulder County's population is forecasted to grow by 51,869 people, at an annual growth rate of 0.73 percent. Based on historical population trends, Superior's population has made up approximately 4 percent of the county's

population. If this trend continues, Superior's population is expected to grow by 2,075 people in the next 20 years. The exhibit below shows 2043 population forecasts for Boulder County along with Superior's 4% share. Much of the forecasted growth for Superior is already captured within the units shown in Section 4.4

Exhibit 41. Population Forecast, Superior and Boulder County

Source: DOLA County 1-Year Population Forecast 2022
Note: *ECONorthwest estimates. Assumes 4.0% share of county population.

				Future Growth (10 Years)		Future Growth (20 Years)	
	2023	2033	2043	# Total	AAGR	# Total	AAGR
Boulder County	331,428	358,550	383,296	27,122	0.79%	51,869	0.73%
Superior*	13,257	14,342	15,332	1,085	0.79%	2,075	0.73%

Based on units in Section 4.4, the following table estimates the resulting population growth:

	Total Units	Total Population
2011	4,597	12,572
2021	4,790	13,053
Currently approved, under construction, or complete since 2021*	5,973	15,656**

*Units associated with the remainder of Downtown Superior, Roger's Farm Wee Cottages, Lanterns Lane, and Superior Shores. See Sec. 4.4.

**The Total Population as a result of these developments assumes an average household size of 2.2 persons per unit.

The work to develop this report included an evaluation of existing zoning and entitlements to understand the opportunity for additional housing units. The only area of Town where additional units are currently possible is within Original Superior. According to the NW Superior Area Study, roughly 100 additional housing units could be constructed on lots that were vacant prior to Marshall Fire. Additional units in Original Town could be built as

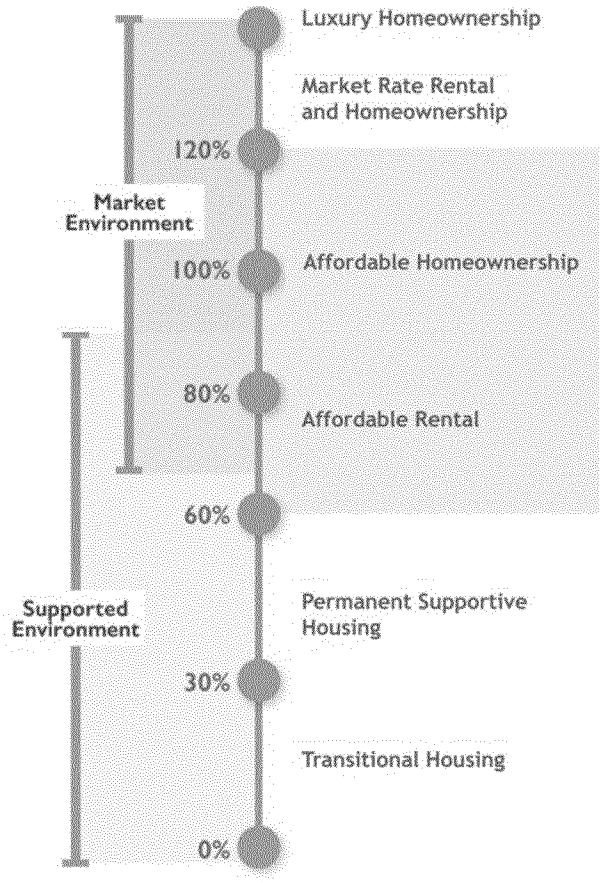
Accessory Dwelling Units. Any additional housing units would require change in land use codes, zoning, and Planned Development Amendments.

Despite the addition of the units described above, the Town will continue to experience demand for additional housing due to its proximity to Boulder and Denver and ongoing regional housing pressure brought on by population growth. Without changes to land use codes and policy, Superior would not be able to accommodate new units to meet the ongoing demand.

8. Future Housing Need

Community housing (also known as the housing continuum) encompasses a wide range of housing needs within an area, not only focused on affordable, or workforce, but all types of housing for people with a diversity of needs. While private, market-rate housing development is essential and desired in many areas, an intentional focus on supporting the development of housing that is attainable and accessible to a wide range of incomes, ages and social status is necessary to maintain a diverse, healthy, and prosperous community.

Exhibit 42. The Housing Continuum



A community with a harmonious housing continuum can effectively fulfill the diverse housing needs of numerous households, ensuring housing stability, particularly for those with lower incomes. It accommodates affordable housing options for the workforce while also offering market-rate and luxury housing for higher-earning households.

This report has identified current challenges for some households in Superior, and has identified trends which will influence housing needs in the future. Generally, there is an adequate amount of larger single-family homes to

meet Superior's needs in the next 20 years. Superior should focus on meeting the needs of targeted groups to provide a better balance of housing in the Town.

This assessment has identified housing needs for the following targeted population groups:

Aging Residents

- Superior's senior population is rapidly growing. This growth is unlikely to slow as Gen Xers grow older.
  - Seniors aged 65 years and older experienced the fastest growth since 2011, increasing by 246 percent.
  - Millennials and Gen Xers represent about 57 percent of Superior's population. As this population ages, Superior's senior population will continue to grow.
- Superior should consider multiple housing options to meet the changing needs of seniors. These could include services to allow "aging-in-place", single-story homes with universal design, rental properties that are targeted to seniors, allowances for multi-generational living including Accessory Dwelling Units throughout Town, and facilities that provide a continuum of care for seniors, including independent living, assisted living, and memory care.

Local low-wage workers, renters of all incomes, and first time homebuyers

- The Town's recently adopted Inclusionary Housing Ordinance does not apply to the properties currently developing new market rate housing.
- In Superior, homeownership rates have decreased 10 percent since 2010, while homeownership rates remained stable in Boulder County and Colorado.
- The share of households who rent increased by 10 percent between 2011 and 2021. This underscores the significance of having rental housing that is both of good quality and reasonably priced.
- The desire for homeownership by millennials and Gen Z will increase as they age. As a result, there will be a demand for starter homes and relatively affordable types of ownership and rental housing.
- Additionally, to accommodate the housing needs for this population group, there will need to be more one- and two-bedroom housing units and housing near major employment centers and services.

ECOnorthwest

DATE:	02-15-2024
TO:	Lisa Ritchie; Town of Superior
FROM:	Oscar Saucedo-Andrade, Mackenzie Visser, Cadence Petros; ECOnorthwest
SUBJECT:	Superior Development Feasibility Analysis

Overview

As part of the Town's Strategic Housing Plan, ECOnorthwest conducted a financial feasibility analysis to evaluate the viability of constructing various housing types and understand what zoning code changes would be needed to support the construction of missing middle housing, multifamily apartments, and mixed-use residential. The analysis evaluated the viability of different housing types across three different neighborhoods in Superior. These included evaluating accessory dwelling units in Rock Creek, missing middle housing in Original Town, and multifamily and mixed-use in the Marketplace.

How is Development Feasiblity Evaluated?

ECOnorthwest set up a pro forma and use a residual land value metric. Residual land value (RLV) is an estimate of what a developer would be able to pay for land (on a per square foot basis) given:

- The property's income from rental revenue,
- The cost to build and operate the building,
- The investment returns needed to attract capital for the project.

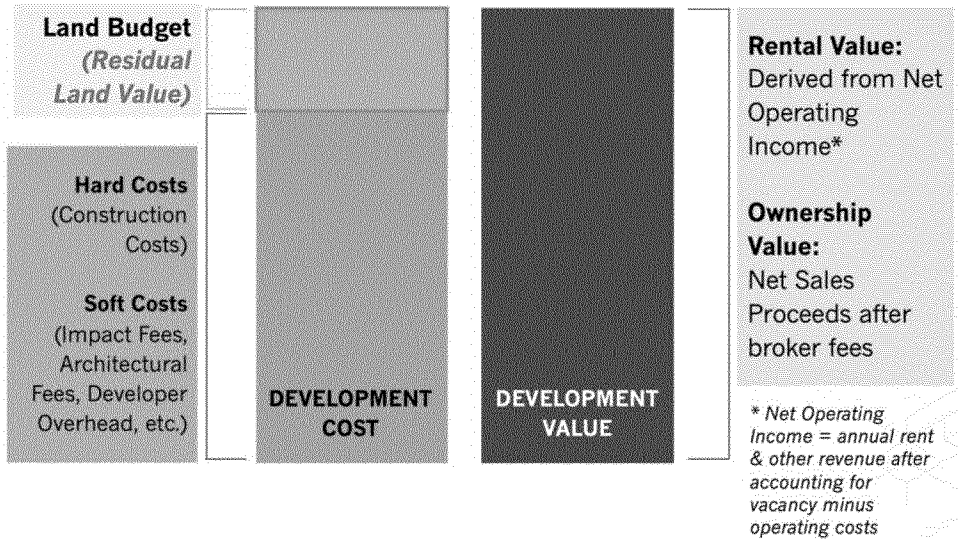
In other words, it is the budget that developers have remaining for land after all the other development constraints have been analyzed. The RLV approach has multiple advantages such as:

- It does not rely on land prices as an input. Rather, observed land prices can be compared with the model outputs to help calibrate the model and ensure it reflects reality.
- It can assess the impacts of changes to the development code because these policies principally affect land value, especially in the short run.

We analyzed each of the prototypes using this RLV approach. The results from this method describe a general analysis of prototypes and do not consider the many potential unique conditions that could be a factor in development feasibility (e.g., increased predevelopment costs, low land basis from longtime land ownership). For these reasons, a residual land value

analyses should be thought of as a strong indicator of the relative likelihood of development, rather than an absolute measure of return to the investor or developer.

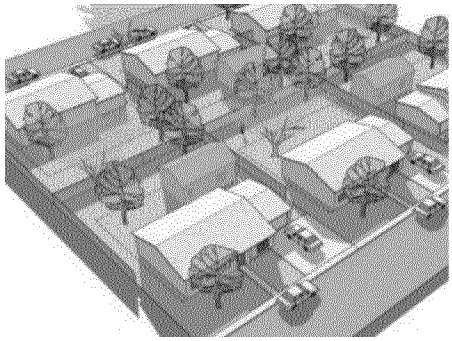
Exhibit 1.Example of Feasible Development using Residual Lan Value (RLV) Model



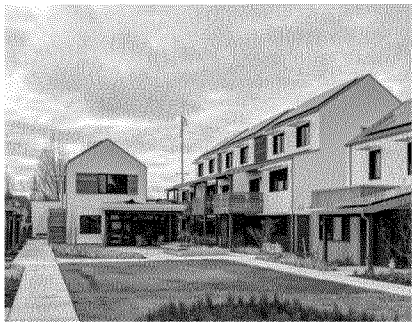
What Housing Prototypes were Evaluated

Six housing prototypes were evaluated for their ability to fit within the existing neighborhood character while gently increasing density and the number of units per lot. Additionally, multifamily and mixed-use housing were assessed to determine if the current inclusionary housing ordinance or other development code barriers hindered their production.

ADU



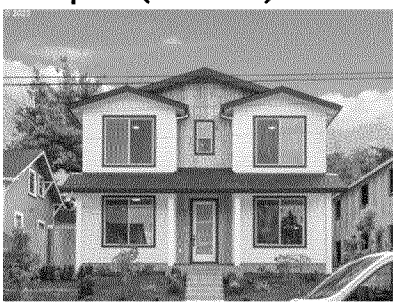
Cottage Housing



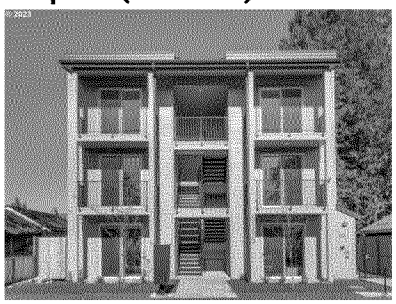
Townhome



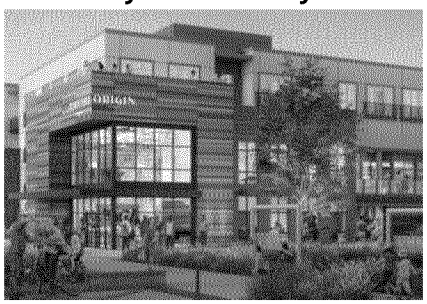
Fourplex (stacked)



Sixplex (stacked)



4-5 Story Multifamily



Development Prototype Summary

Exhibit 2 below, provides a detailed summary of the development program for each of the housing types. In some instances, we provide examples of recent comparable developments built in and around the Town of Superior.

Exhibit 2. Housing Prototype Development Program

BUILDING SUMMARY TABLE							
	ADU	**Cottage**	**Triplex**	**Fourplex**	**Sixplex**	**4 Story**	**5 Story**
Tenure	Rental	Ownership	Ownership/ Rental	Ownership/R ental	Ownership/R ental	Rental	Rental
Development Example		Rogers Farm				Origin Apartments	Origin Apartments
Total floors	2	2	2	2	3	4	5
Units	1	6	3	4	6	30	40
Parking	Surface	Garage	Surface	Surface	Surface	Surface	Surface
Parking ratio	1.0	2.0	1.0	2.0	2.0	2.1	2.0
Average unit size	800	1,000	1,200	1,400	1,200	733	733
Unit mix	1-bed	2 beds	2 beds	2 beds	2 beds	25% studio, 50% 1-bed, 15% 2-bed, 10% 3-bed	25% studio, 50% 1-bed, 15% 2-bed, 10% 3-bed
Retail space	-	-	-	-	-	6,867	7,325

Financial Feasibility Findings

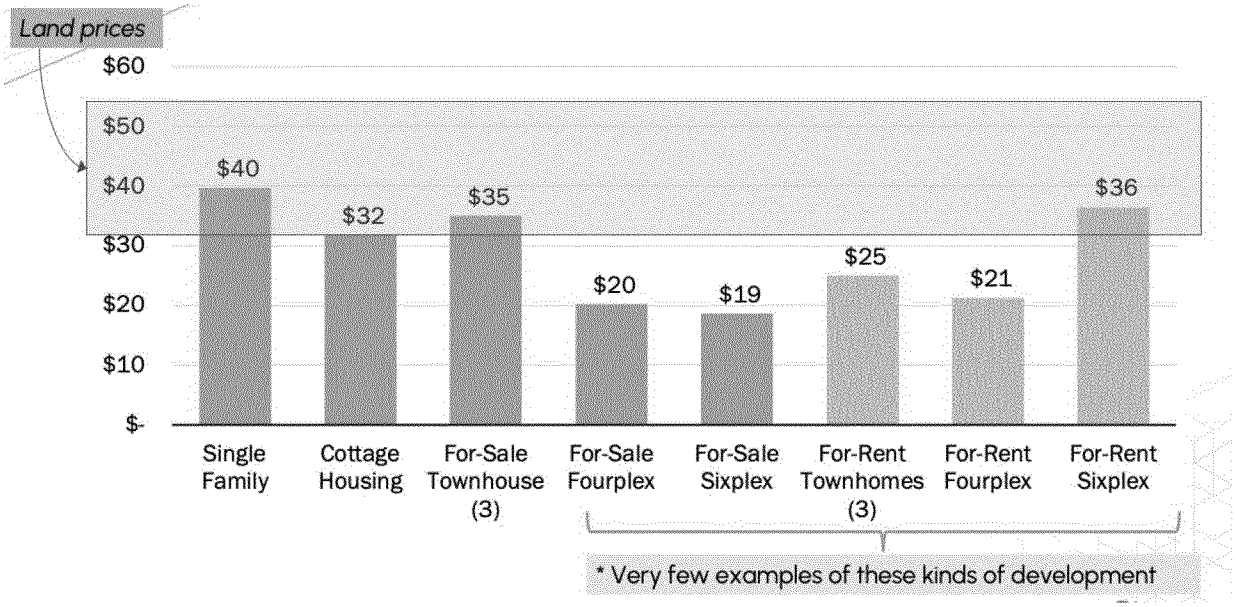
Missing Middle Housing – Original Town

Housing prototypes include cottage clusters, townhomes, fourplex, and sixplexes. These housing prototypes were evaluated for the Original Town neighborhood. For this analysis, we

also compared the feasibility of single-family detached homes as a baseline to the other housing prototypes.

- Single-family detached housing outperforms all other missing middle housing prototypes mostly due to the higher achievable sales price and because it is allowed to be built across all residential zones including the R-M zone which is intended for moderate density housing such as multifamily.
- Townhomes and cottage cluster housing are the most viable missing middle housing prototypes. Superior has seen development of cottage clusters and townhomes in recent years and the analysis shows that these housing types will continue to be viable if land prices do not continue to escalate and construction costs remain stable.
- Fourplexes and sixplexes have not been built in Superior is because the feasibility gap varies due to demand and the achievable rents and sales prices. Regulatory barriers, such as existing zoning regulations prohibit some of these housing prototypes simply by the height and density limits.
- Superior prices for vacant land tend to range between $32 and $54 per square foot. The limited supply of vacant land in Superior has pushed land prices to all-time highs, making any type of development challenging.

Exhibit 3.Residual Land Value Results for Missing Middle Housing



Source: ECOnorthwest

Note: If a housing prototype's residual land value is equal to or greater than existing land prices ($32-$54 per square foot) then it is considered that the prototype is viable.

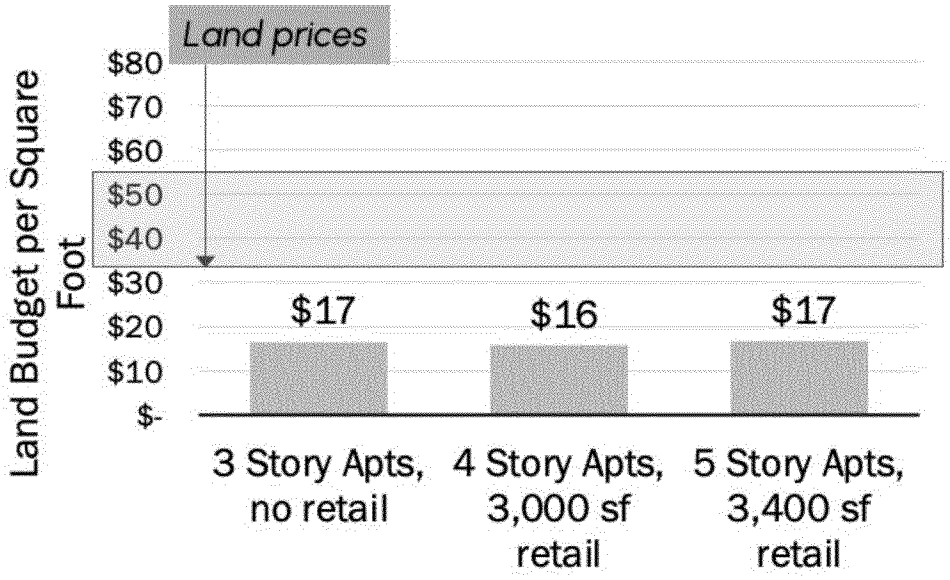
Multifamily and Mixed-Use – Marketplace

For this analysis, we evaluated the feasibility of multifamily and mixed-use developments under existing development standards for the Marketplace Planned Development. This exercise would help us understand if the current development regulations act as development barriers and modify them for market realities.

EXISTING ZONING

- No multifamily or mixed-use development is feasible under existing development regulations for the Marketplace.
- Development regulations for the Marketplace were written exclusively to promote commercial and retail uses. As a result, residential uses were limited as a conditional use and development standards for residential at the Marketplace are not supportive of the scale and density needed to make multifamily and mixed-use residential viable in today's market.

Exhibit 4. Residual Land Value Results for Multifamily and Mixed-use



ZONING CONSIDERATIONS

ECOnorthwest utilized recent development comparisons and building specifications from nearby cities to model realistic multifamily and mixed-use development projects.

Exhibit 5 below shows the development standards that need to be modified in order to make multifamily and mixed-use development viable. These are development standards that the Town of Superior could think of amending as it begins the process of updating its Comprehensive Plan.

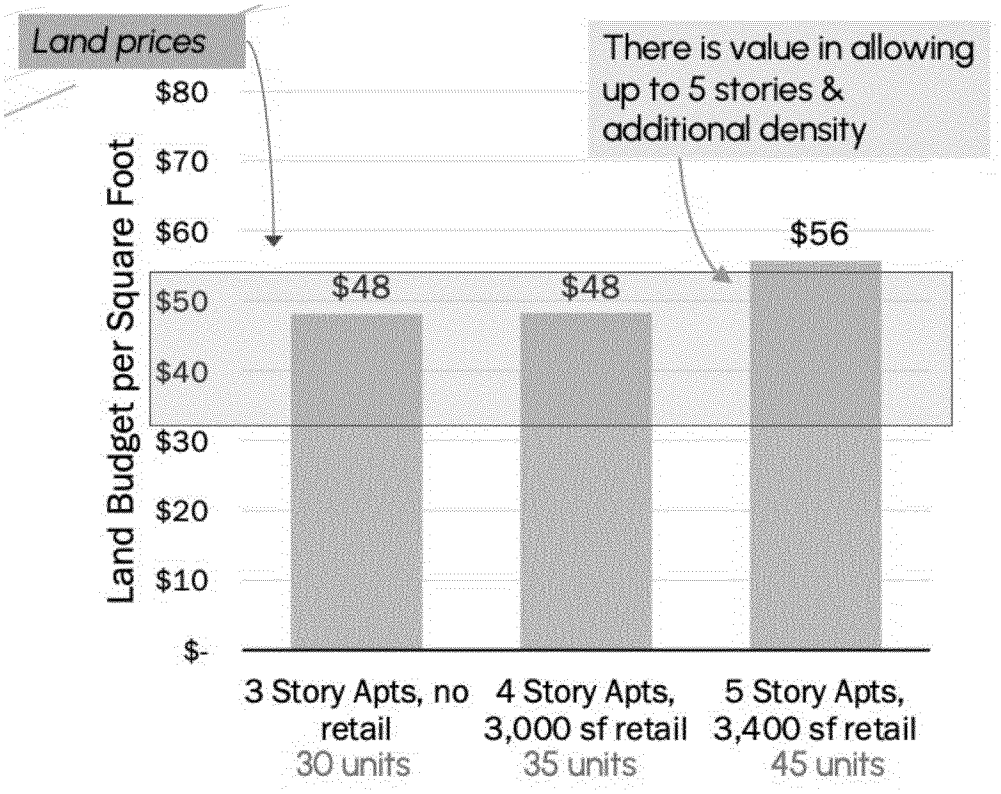
Exhibit 5. Modeled Development Standards

MODELED BUILDING STANDARDS	
Parking ratio	~2.1 stalls per unit (includes parking for retail)
Density	34 – 39 dwelling units per acre
Floor Area Ratio	0.59 – 0.73
Height	35 to 55 feet
Gross floor area	27,000 – 40,000 sf
Impervious coverage	75%
Lot size	44,000 – 53,000 sf
Affordable units	15% of units at 80% AMI

FINDINGS

- Marketplace mixed-use development is viable with the following combination of development amendments: reduction to parking minimums of 2.1 (which includes parking for retail), configuration of parking as surfaced parked or tucked under, height limit above 35 feet, and 34 to 39 density of dwelling units per acre.
- Both multifamily and mixed-use developments are viable even with the inclusionary housing ordinance requirement of 15 percent of the housing units needing to be restricted affordable at 80 percent of AMI.
- Feasibility results show that multifamily and mixed-use development can be more viable if they can build larger and taller. Additional development incentives such as density and height bonuses could help with requiring more restricted affordable housing units or requiring less units but at deeper affordability levels.
- As land continues to become scarce, multifamily and mixed-use development will become challenging for a number of reasons. From a financial perspective, site acquisition costs and the need for dedicated, and typically structured, parking significantly impacts construction costs. Reducing or eliminating parking minimums and identifying shared parking opportunities can help the reduce construction costs and increase the viability of development projects. Additionally, increasing the development potential of a project such as increasing the height limit, number of stories and density can all help overall feasibility.

Exhibit 6. Residual Land Value Results for Multifamily and Mixed-use

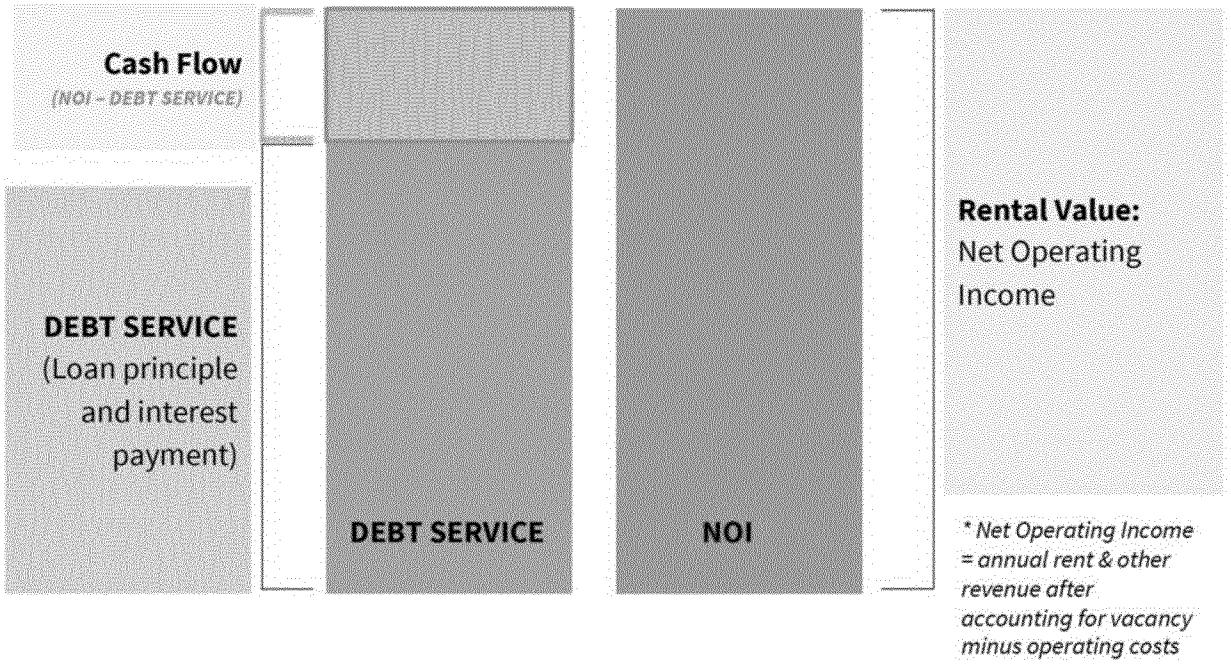


Accessory Dwelling Units – Rock Creek

To understand the feasibility of and accessory dwelling unit we used Debt Service Coverage Ratio (DSCR) as a metric to evaluate feasibility. DSCR is a key metric that measures a property's ability to cover its debt (loan payment) obligations with its income. A homeowner is very likely to obtain a loan for the construction of the ADU and use the income of renting the unit to pay the loan and profit some revenue.

Generally, DSCR greater than 1.0 indicates that a property generates more income than needed for debt payments, which is favorable. Lenders, developers, and investors use the DSCR to assess risk, make financing decisions, evaluate investment viability, and ensure operational efficiency. In today's lending market, financial lenders look for a 1.5 or greater DSCR to deem a proposed development worthy of lending the loan and would be earning enough revenue to pay back the loan.

Exhibit 7. Example of Debt Service Coverage Ratio Model



FINDINGS

Exhibit 8 below details the ADU financial revenue assumptions and expected DSCR to cover the loan. Based on a per unit market rent of $2,250 per month and an expected construction loan to cover 70 percent of the total construction costs, a homeowner would be getting a loan for $175,994. Based on an annual revenue of $22,633, the ADU's DSCR is 1.87, indicating that the ADU is able to generate substantially more income than needed to cover the loan payment. This suggest that the investment is financially sound and viable to build.

Exhibit 8. ADU Financials and DSCR

Market Rent	$2,250
Gross Market Rent/ Annually	$26,997
Operating Expense, Property Tax, Maintenance/ Annually	$4,364
Residential NOI/ Annually	$22,633
ADU Total Cost	$251,420
Loan to Cost ratio (LTC)	70%
Maximum Loan Amount (LTC)	$175,994
Loan Payment/ Annually	$12,109
Debt Service Coverage Ratio	**1.87**

- Financially ADUs are feasible for homeowners in Superior and are able to make a profit by charging market-rate rents ($2,250) for the dwelling unit.

However, there can be barriers to ADU development that are harder to model through a pro forma analysis.

These include:

- **Building codes:** Remodeling existing homes to create internal ADU's may pose additional building code challenges that are difficult to overcome by homeowner.
- **Financial:** The total development cost is likely over $250,000; the homeowner can apply for a loan but would likely need at least $80,000 in cash.
- **Risk:** If the homeowner is not able to rent the ADU at their expected rate they may risk not being able to pay off any debt incurred for construction.
- **Homeowner interest:** Adding an ADU can be a long and complicated process, and many homeowners are not necessarily interested in renting out another home.
- **HOA requirements:** Could limit where and how ADUs can be added.
- **Lot size and configurations:** The homeowner must have enough area internally or externally to fit the ADU and parking stall.

OUTREACH & ENGAGEMENT SUMMARY

Town of Superior | **Housing Needs Assessment & Strategic Plan**

This document serves as a record and summary of the outreach and engagement efforts conducted as part of the planning process for the Town's first Housing Needs Assessment & Strategic Plan.

Executive Summary

Outreach Efforts:

- 3 open houses
- 4 stakeholder events
- 2 community events
- 7 online surveys/question prompts
- Project website on ShapeSuperior

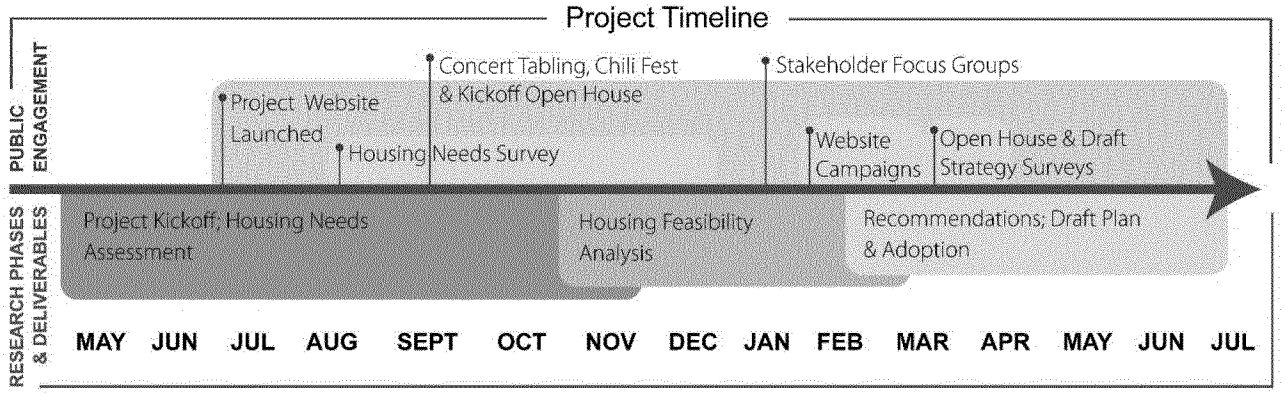
Key Findings:

- Superior residents care most about aging in place, affordable homeownership, preserving community character in the face of development pressure, and Superior as a "complete community[1]" with amenities and activities.
- Many Superior residents recognize that there is a need for housing that is affordable to low-income households.
- Superior residents identify costs, overall supply, and availability of options as the greatest housing challenges in the community.
- Stakeholders identified a need for supportive, affordable, and mixed income communities to support seniors and residents with disabilities.
- Stakeholders identified community misunderstanding and opposition, cost, market variability, and funding limitations as key barriers to supportive and affordable housing provision.
- Superior residents expressed a strong preference for single family traditionally owned homes, but also illustrated robust and varied interest in other housing options.
- Superior residents expressed mixed support and opposition for draft housing strategies, with more support for strategies that reduce housing barriers (Goal 3), and least support for strategies that support affordable housing efforts (Goal 2).
- Stakeholders recommended a variety of potential strategies and resources to promote and allow for housing that supports community members who are most vulnerable.

[1] "Complete communities" is a planning concept that promotes walkable, mixed-use communities where residents can easily and safely access a variety of daily needs, activities, and social interactions.

Engagement Efforts Overview

The Housing Needs Assessment & Strategic Plan process started in May 2023 and is scheduled to wrap up in June or July 2024. The project included three key phases, across which engagement and outreach efforts were conducted to inform the community about the project and to provide opportunities for meaningful input.



The following list identifies all outreach and engagement efforts, from which input and feedback is summarized:

- **ShapeSuperior project webpage**, launched in late June 2023 and served as a hub for project information and hosted various online input opportunities throughout the remainder of the project.

- **Online survey to assess housing needs** as a supplement to other sources of data collection and analysis. (August 12 – October 31, 2023)

- Town of Superior **Summer Concert Series tabling** to promote the project and online housing needs survey. (September 9, 2023)

- Town of Superior **Chili Fest tabling** to promote the project and online survey, and for participants to share their future vision for housing in Superior. (September 9, 2023)

- **Kickoff open house** to assess housing needs and preferences as a supplement to other sources of data collection and analysis. (September 11, 2023)

- **Two facilitated stakeholder focus group conversations** with advocates who work with special interest groups, such as persons with disabilities, seniors, and low-income individuals. Stakeholders included representatives of the Boulder Association for Community Living (ACL), Blue Spruce Community, Superior residents, parents of adult children with developmental disabilities, Boulder County Housing and Human Services Department (BCHHSD), an affordable housing developer with experience in the Boulder County region, and Sister Carmen Community Center. (January 19 and 29, 2024)

- Two meetings with **Superior Stakeholder Committees & Groups** (Advisory Committee on Environmental Sustainability and Superior Youth Leadership Council) to spread awareness of the project. These events did not have formal input activities but did offer opportunity for questions and discussion. (February 8 and March 6, 2024)

- **Project website and social media storytelling campaign and three survey question prompts** to illustrate findings from the Housing Needs Assessment and begin the conversation about housing strategies. (February 14 – March 11, 2024)

- **Two open house events** to share draft housing strategies and gather input regarding strategy preferences and priorities. (March 16 and 18, 2024)

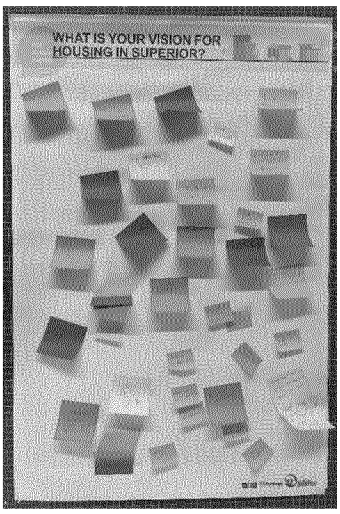
- **Three online surveys** to gather additional input regarding strategy preferences and priorities. (March 19 – April 12, 2024)

Approximately 200 people participated at in-person events and the Town received more than 1,340 survey responses throughout the project.



Findings, Themes & Key Takeaways

Results and findings from engagement input are summarized by key topics. The events and engagement tools that contributed to each topical section are identified.



Housing Vision

(Chili Fest tabling, kickoff open house)

Key themes include:

- Desire for the ability to age within the community (housing that supports independent senior living)
- Desire for greater affordability and access to housing, especially for homeownership, young adults/families, and seniors
- Worry about increasing density and desire to preserve existing community character
- Desire to prioritize resilience and mitigation in the face of hazard risks
- Desire for Superior to be a "complete community" with amenities and activities, such as restaurants, cafes, local transit, retail, mixed-use, etc.

Current Housing Conditions

(Housing needs survey, kickoff open house)

Note: the housing needs survey incorporated a skip logic that directed respondents to different questions based on whether they are current residents of Superior or not. These different response groups are indicated and parsed out in the data below.

The following current conditions were reported by survey respondents who indicated that they are current residents of Superior (96%):

Household Composition:

- 54% reported that they live with a spouse and/or children
- 30% reported that they live with a spouse and no children
- 13% reported that they live alone

Housing Characteristics:

- 86% reported that they own the home they live in
- 11% reported that they rent the home they live in
- 73% reported that they live in a single-family home
- 20% reported that they live in a townhome
- 5% reported that they live in an apartment or condo complex

Household Income & Housing Affordability:

- 46% reported that their household income is $144,000 or higher (100% + AMI)
- 38% reported that their household income is between $87,000 - $144,000 (60% - 100% AMI)

- 16% reported that their household income is less than $87,000 (<60% AMI)
- 29% reported that they spend more than 30% of their household income on housing (housing cost burdened)
- An additional 18% reported that transportation costs (time and money) significantly impact their quality of life and/or the housing they feel they can afford[2]

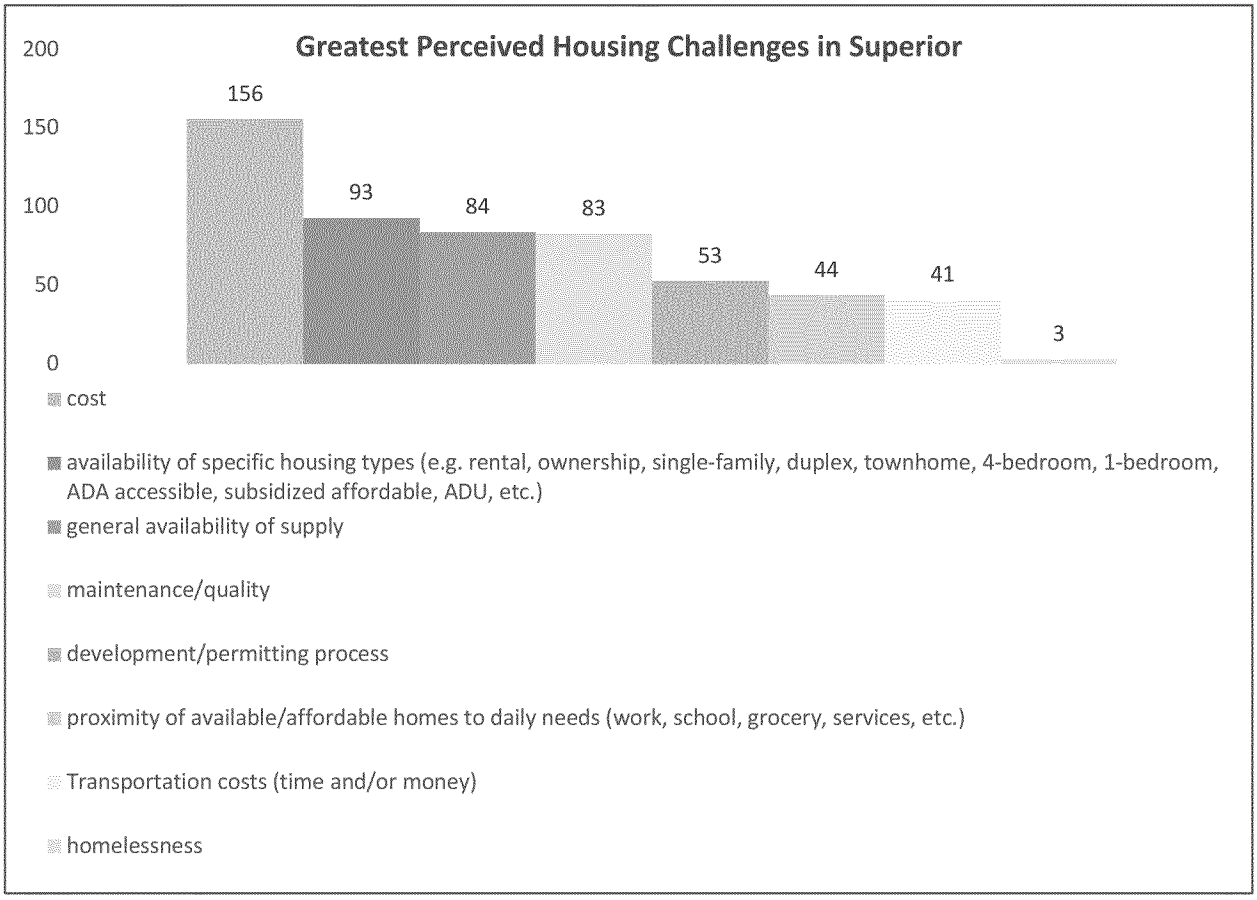
Housing Satisfaction & Prospective Movers:

- 44% reported that they are either not satisfied or somewhat satisfied with their current housing conditions in Superior
- 42% reported that they are somewhat or very likely to move within the next 5 years; 75% of those respondents said that they want to stay in Superior

Housing Challenges

(Housing needs survey, kickoff open house, stakeholder focus groups)

Greatest housing challenges (all respondents) – respondents reported that they think cost, availability of specific housing types, general availability of supply, and maintenance and quality of the current housing stock are the greatest challenges related to housing opportunity and choice in Superior.



[2] Three participants of the kickoff open house illustrated on a map how far they live (Lakewood, Thornton, Boulder) from their work in Superior.

Challenges & Barriers Identified by Special Interest Groups Stakeholders

- Participants expressed that high land costs and fluctuating market conditions are key barriers to the development and provision of affordable housing.
    - While a worthwhile strategy, participants expressed that these cost challenges are exacerbated by prioritization of infill development.
- Participants expressed that low-income, special need, and senior housing should be prioritized for Transit-Oriented locations to maximize choice in transportation and access to amenities for individuals who may not drive.
    - Again, participants expressed how land costs or availability are often barriers to this need and priority.
- Participants expressed that community values around aesthetics and desire for open space preservation also exacerbate cost and land availability challenges.
- Participants also expressed that current residents and property owners are protective of their views, which can hinder or limit affordable housing projects.
- Participants expressed concern about barriers to developing mixed-income communities, rather than concentrating low-income, special need, or senior housing within one location that is isolated and/or segregated from the rest of the community.
    - For example, Low Income Housing Tax Credits and property management can be difficult for mixed-income developments

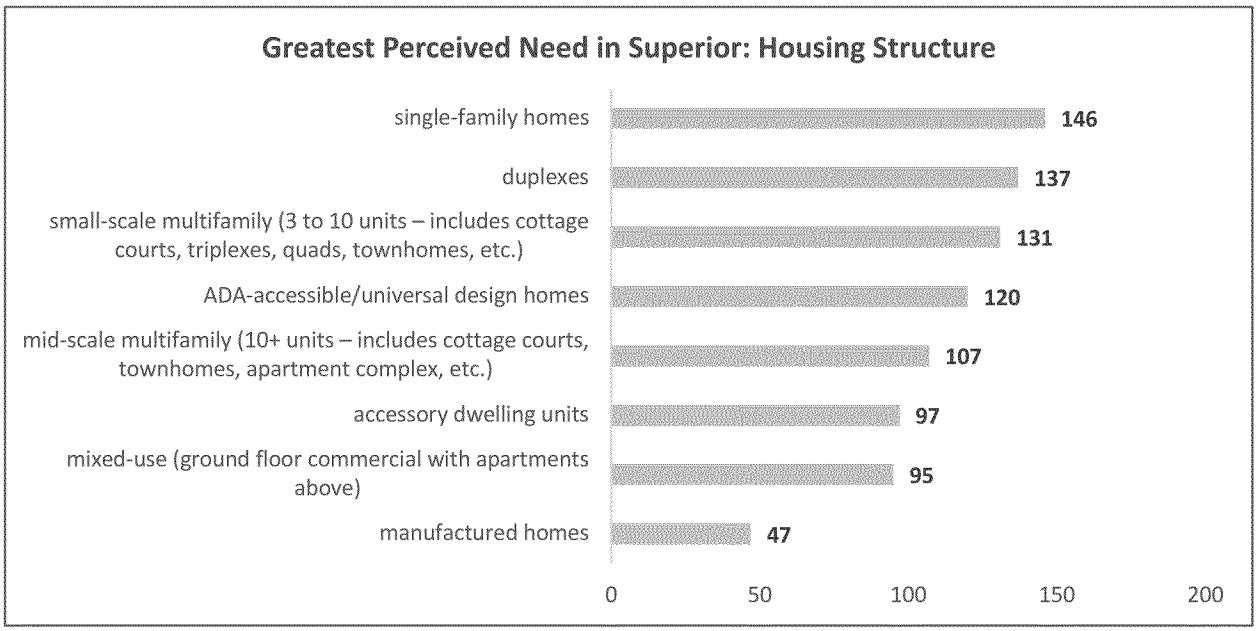
General Housing Needs & Preferences

(Housing needs survey, kickoff open house, stakeholder focus groups)

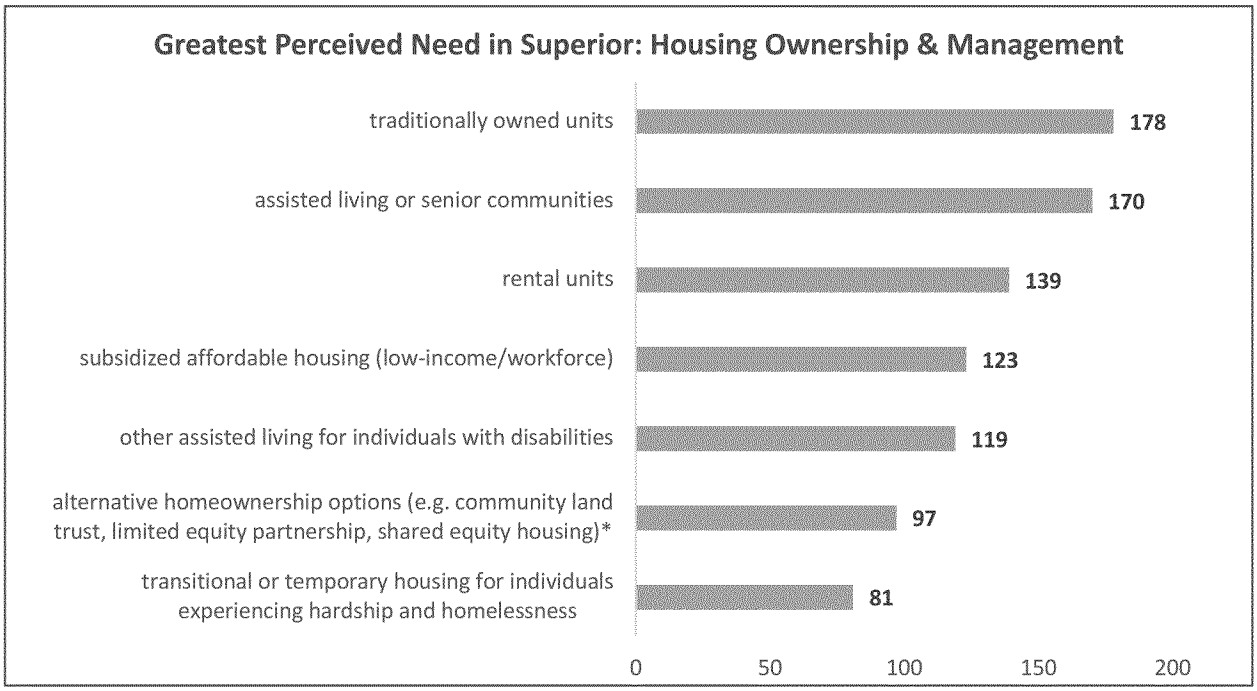
Greatest need among housing structure options (all respondents[3]) – respondents reported that they think single-family homes, duplexes, and small-scale multifamily housing structures are needed most in Superior. However, the mix of responses illustrates local recognition that a wide variety of housing options would benefit the community.



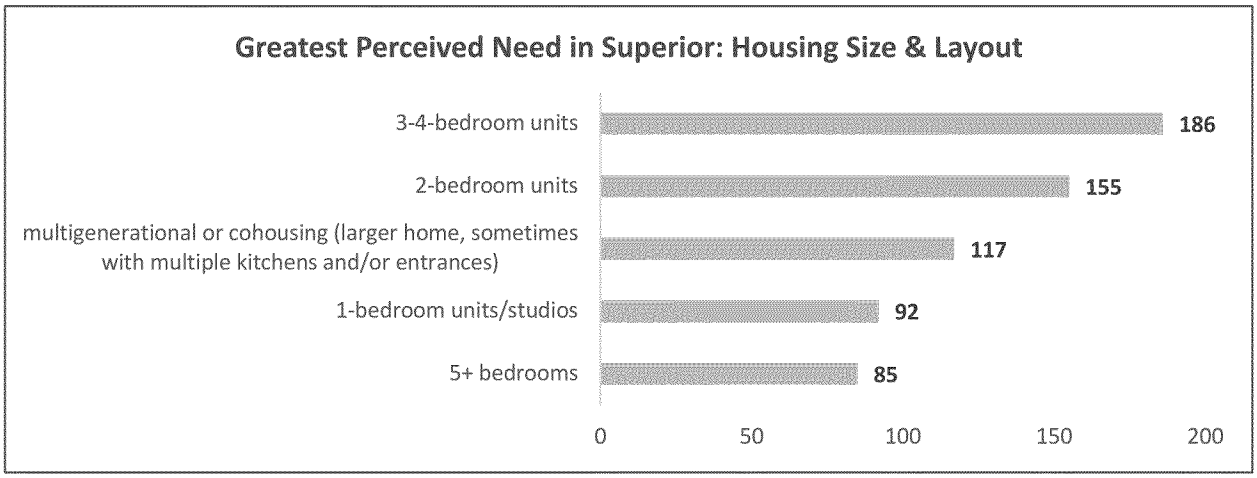
[3] Responses from a similar question posed at the kick off open house are also included in this result



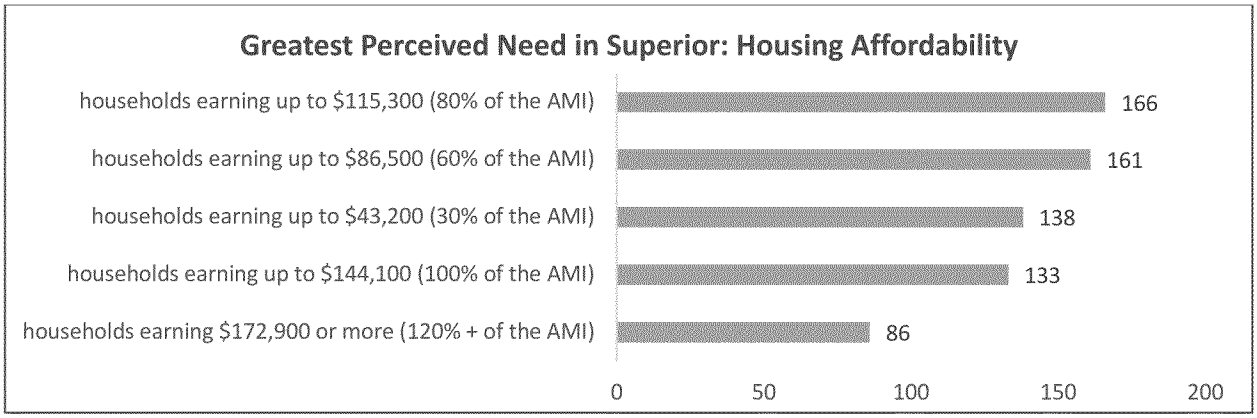
Greatest need among housing ownership and management options (all respondents) – respondents reported that they think traditionally owned homes and assisted living or senior communities are needed most in Superior. Again, the mix of responses illustrates recognition that a wide variety of ownership and rental options would benefit the community.



Greatest need among housing size and layout options (all respondents) – respondents reported that they think 2, 3, and 4 bedroom units are needed most in Superior, while smaller, larger, and multigenerational options would also be beneficial.



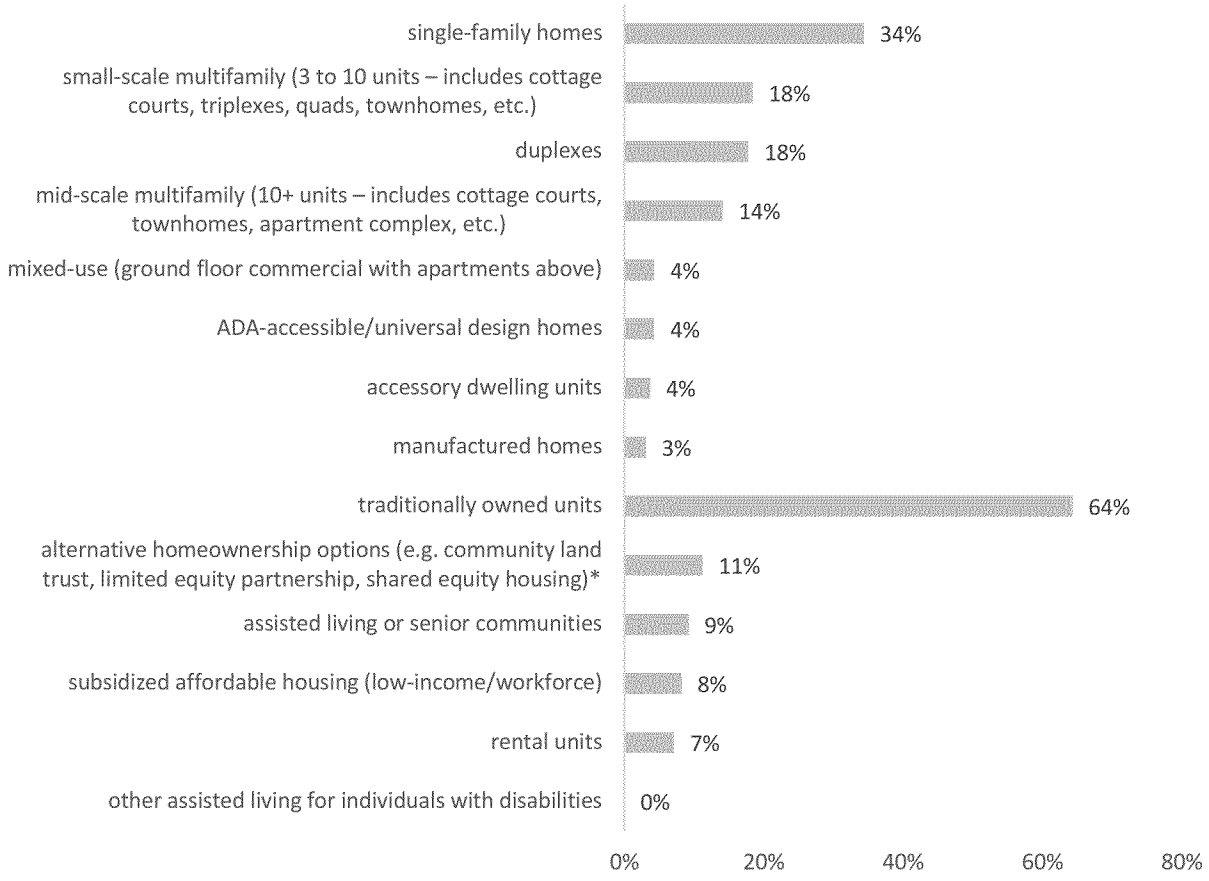
Greatest need for housing options affordable at specific household income levels (all respondents[4]) – respondents reported that they think housing affordable to households earning 60% to 80% of the Area Median Income ($43,200 - $115,300) is needed most in Superior.



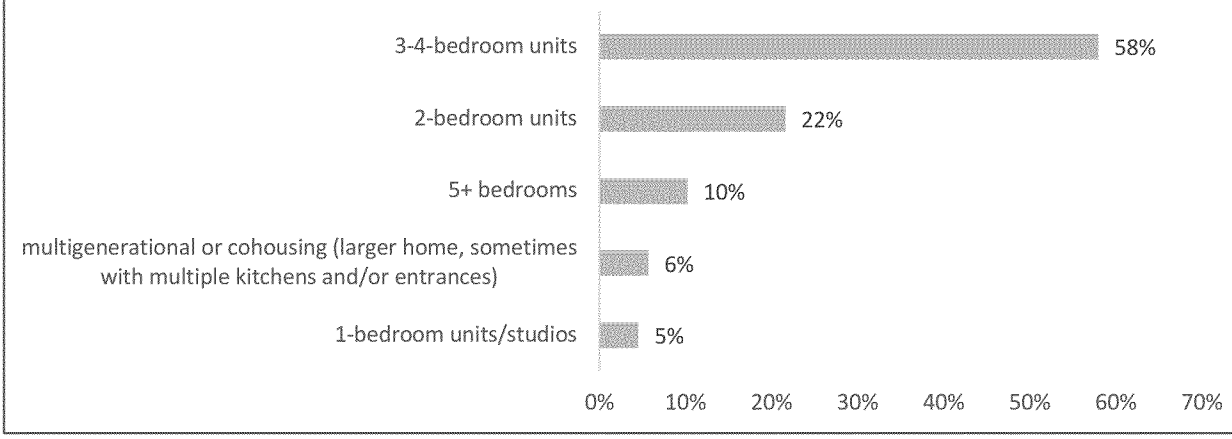
Personal Preferences of Superior Residents Who are Considering Moving (respondents who indicated they are likely to move in the next 5 years and want to stay in Superior[5]) – respondents reported that they are most interested in traditionally owned homes. In terms of specific housing types, single-family homes received the most interest. Considering a variety of "missing middle" housing types collectively, however, 64% of respondents reported that they would be most interested in this diversity of alternative options to single family homes. Respondents also reported most interest in 2, 3, and 4 bedroom units. Respondents were not directly asked why they would be likely to move.

[4] Responses from a similar question posed at the kick off open house are also included in this result
[5] Ibid

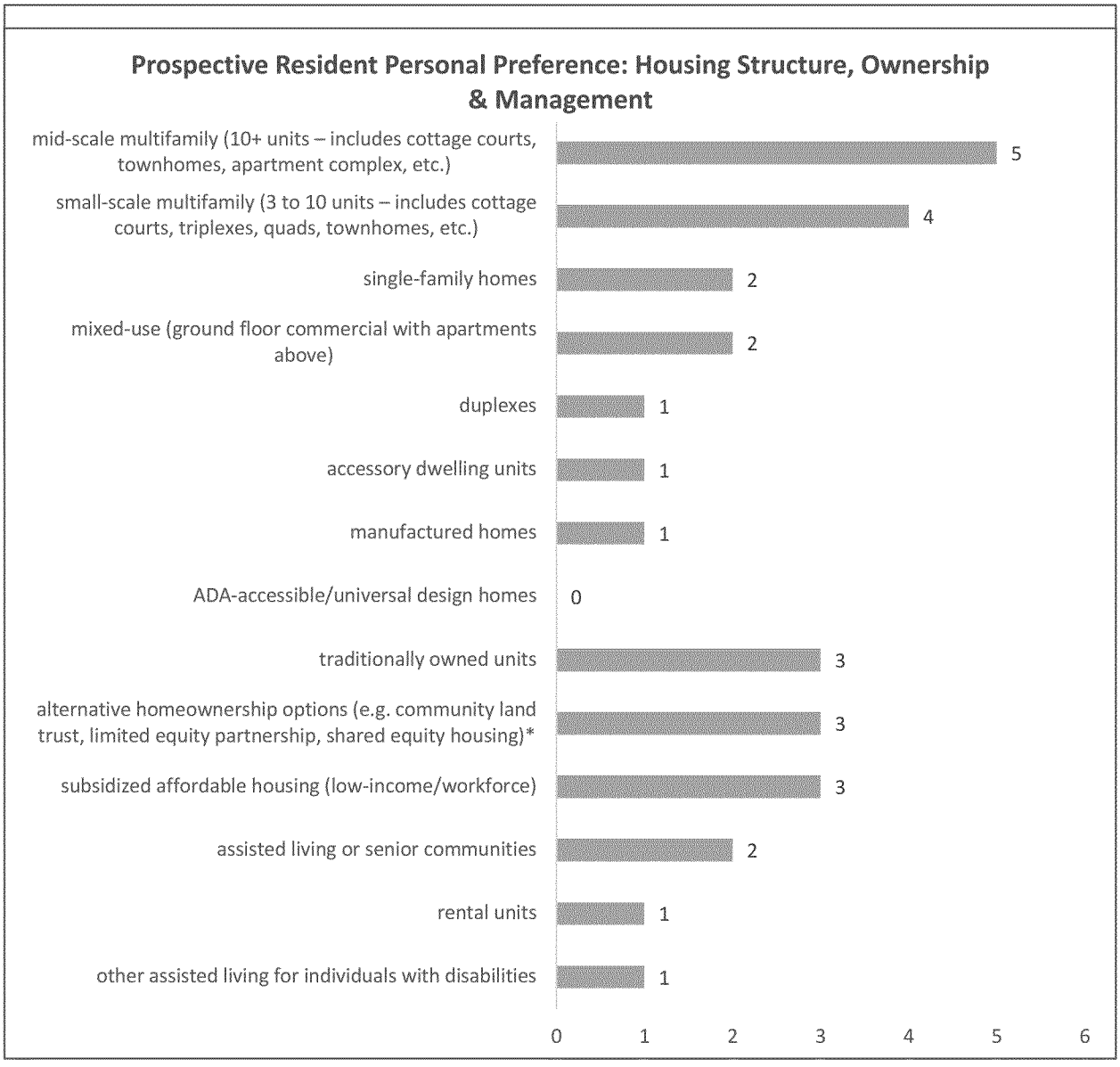
Superior Resident Personal Preference: Housing Structure Ownership & Management



Superior Resident Personal Preference: Housing Size & Layout



Personal Preferences of Non-Residents[6] Who Would Like to Move to Superior (respondents who indicated they are interested in moving to Superior in the next 5 years) – compared to the preferences of current Superior residents, respondents who would like to live in Superior indicated stronger preferences for "missing middle" housing types, alternative ownership and rental structures (including subsidized affordable housing), and for smaller or multigenerational units. While a small sample size, these differences in preference indicate some of the barriers that may be prohibitive for prospective residents' ability to live in Superior.



[6] This was a very small group of survey respondents. Several indicated that they either work in or have family in Superior. All respondents indicated that their household income is less than the Area Median Income (AMI; $144,000), with almost a quarter reporting that their income is at or below 60% AMI.

Needs Identified by Special Interest Groups Stakeholders:

- Participants expressed a specific need for rental and utility assistance in the region, noting that existing organizations and funding cannot meet demand. Interestingly, participants noted that MOST residents currently seeking these services do not live in Superior, but some do work in Superior. Indicating that these individuals are priced out of the community.
- Participants noted a specific need for affordable housing at the lowest income brackets (most affordable housing projects fall in the "workforce" mid-range).
- Participants noted a specific need for a range of housing options for seniors and individuals with intellectual and developmental disabilities, including fully supported, semi-independent, and independent (usually multigenerational family living in separate units on the same property).
    - Participants also noted prohibitive costs associated with most assisted living for seniors or those with disabilities, indicating a need for combined services and affordability.

Potential Solutions & Strategies

(Kickoff open house, stakeholder focus groups, storytelling campaign question responses, housing strategy open house events, strategies surveys)

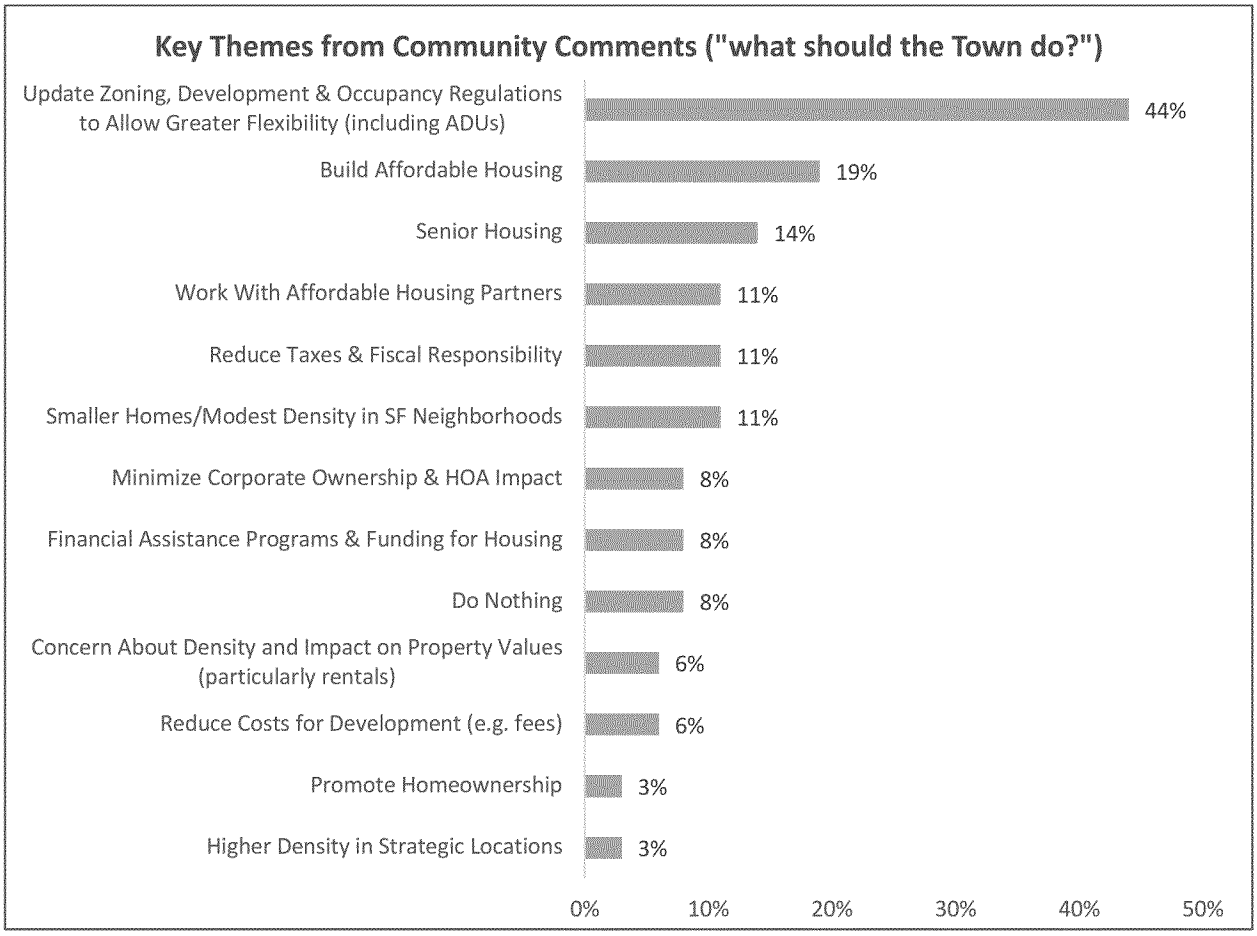
Solutions Identified by Kickoff Open House Participants:

- Modify occupancy limit caps for unrelated households (3)[7]
- Clarify ADU restrictions
- Promote and allow for multigenerational living
- Regulate short term rentals
- Town-owned or purchased land for Habitat for Humanity partnership (affordable owner housing)
- Provide additional ways to reduce senior property taxes

Participants also indicated a slight preference for regulatory tools, although financial and organizational tools also received some support.

Approaches & Potential Solutions Identified by the Community (storytelling campaign responses) – Open-ended responses resulted in 13 key themes related to outcomes, approaches, and strategies related to housing in Superior. Those that rose to the top include updates to regulations (such as zoning, development code, etc.) to allow for more flexibility around what's permitted in the housing market and efforts to build affordable housing.

[7] Colorado House Bill 24-1007 was recently signed into law, prohibiting residential occupancy limits statewide.



Solutions Identified by Special Interest Groups Stakeholders:

- Participants pointed out that education about changing market conditions and thus, disparities in opportunity for homeownership over time, is essential for increasing collective understanding and community support for affordable housing.
- Participants expressed an opportunity to serve both seniors and residents with disabilities (+ veterans, etc.) in the same housing community, allowing for resource efficiency and generational integration.
    - Participants specifically mentioned tiny home or modular/manufactured home communities and ADUs as useful options to serve these populations (semi-independent living).
    - Participants also noted the importance of Universal Design in creating homes that can accommodate virtually any household's needs.
        - For example, requiring a portion of units within multifamily development to follow Universal Design principles (form of inclusionary zoning) or encouraging Universal Design through design standards.
    - Participants referenced Madison House and The Kelsey as useful resources for case studies and best practices. Participants also mentioned the Prospect New Town (Longmont) and Holiday (Boulder) developments as examples of successfully curating community.

    - Participants recognized that available funding pools for each of these specific needs usually have differing, and often conflicting, requirements or regulations.
    - Participants noted that communities tend to be more accepting of senior housing than low-income affordable housing, even if the senior facilities are also subsidized.
- Participants noted the national trend towards single-family zoning elimination, citing this as a strategy to consider.
    - Participants also recommended that the Town provide a suite of pre-approved ADU designs, to help make this kind of infill development more feasible for property owners. This concept could also be applied to other housing types.
    - Participants noted the challenges and barriers that HOAs contribute to allowing new housing types in existing single-family neighborhoods.
- Participants noted the importance of a clear, predictable, and efficient entitlement process, and commended Superior staff for their hard work and accessibility when it comes to navigating affordable housing development locally.
- Participants noted that a lot of people have previously taken a risk by living with roommates to keep costs down (technically in violation of cap regulations on unrelated households – 3 people in Superior).
    - Participants noted that increasing or removing this cap would be a worthwhile strategy to increase opportunity and reduce the risk of eviction.[8]

Draft Strategy Prioritization (housing strategy open house events, strategy surveys) – The following tables illustrate residents' priority preferences for draft housing strategies, which are grouped by three overarching goals: 1) Increase housing choices for people, 2) Support and promote local and regional affordable housing efforts, and 3) Remove housing barriers for people who often encounter them. In general, participants were more supportive of strategies to support reduce housing barriers (Goal 3), and less supportive of strategies to support affordable housing efforts. Support for strategies related to providing more housing choice overall was mixed.

[8] As noted above, residential occupancy limits are now prohibited by State Law.

1. Increase Housing Choices for People									
Draft Strategy	**Total Yes (count)**	**Total Yes (%)**	**Total Neutral (count)**	**Total Neutral (%)**	**Total Yes + Neutral (count)**	**Total Yes + Neutral (%)**	**Total No (count)**	**Total No (%)**	**Total Yes + Neutral - Total No**
Establish clear and objective development standards for new housing in newly established neighborhoods.	206	52%	67	17%	273	69%	120	31%	153
Review and clarify ADU development standards to make it easier to develop this housing type. (I.e., municipal code structure, etc.)	165	41%	62	16%	227	57%	172	43%	55
Explore allowing ADU's town wide.	156	39%	62	16%	218	55%	178	45%	40
Develop pre-approved ADU housing plan sets to streamline review process and development of this housing type.	141	36%	76	19%	217	55%	180	45%	37
Identify locations for small-lot zoning and smaller housing units. (As part of the comprehensive plan consider evaluating residential land to support higher-density residential to allow greater housing options)	117	29%	47	12%	164	41%	237	59%	-73
Develop pre-approved missing middle housing plan sets.	97	25%	55	14%	152	38%	243	62%	-91
Consider allowing moderate density increases in single family zones to allow for duplex and triplexes.	116	29%	38	9%	154	38%	247	62%	-93
Explore incentives for ADU's and tie it to affordability requirements such as deed-restrictions.	83	21%	66	17%	149	38%	243	62%	-94
Evaluate minimum lot size, setbacks, lot coverage, and design standards to allow for increased density across all zones and existing planned developments (PD's).	88	22%	43	11%	131	33%	262	67%	-131
Evaluate parking reductions for housing types and analyze the modification of on-street parking.	79	20%	52	13%	131	33%	265	67%	-134
Explore reducing minimum parking requirements for missing middle housing, multifamily, mixed-use, senior housing, and ADU's.	80	20%	49	12%	129	32%	269	68%	-140
Establish thresholds for development types that could be approved administratively without a Town Board or public hearing meeting to support state housing legislation such as Proposition 123.	52	13%	48	12%	100	26%	291	74%	-191

2. Support and Promote Local and Regional Affordable Housing Efforts									
Draft Strategy	**Total Yes (count)**	**Total Yes (%)**	**Total Neutral (count)**	**Total Neutral (%)**	**Total Yes + Neutral (count)**	**Total Yes + Neutral (%)**	**Total No (count)**	**Total No (%)**	**Total Yes + Neutral - Total No**
Partner with organizations such as Habitat for Humanity and Boulder County Housing Authority to support the creation of affordable homeownership options.	98	32%	40	13%	138	45%	171	55%	-33
Subsidized or reduced fees for affordable housing projects.	74	24%	35	11%	109	35%	203	65%	-94
Explore the creation of a housing trust fund and other local revenue sources to fund a variety of affordable housing activities.	52	17%	49	16%	101	33%	205	67%	-104
Establish the fee-in-lieu amounts as intended in the Inclusionary Housing Ordinance	36	12%	61	20%	97	32%	208	68%	-111
2.2.3. Expedited review for affordable housing projects.	63	20%	35	11%	98	32%	210	68%	-112
Partner with affordable housing providers to redevelop vacant or underutilized land for affordable housing.	69	22%	29	9%	98	32%	212	68%	-114
Explore the creation of a commercial/residential linkage fee to provide financial support for affordable housing projects.	45	15%	49	16%	94	31%	211	69%	-117
Density bonus.	50	16%	35	11%	85	28%	224	72%	-139
Height bonus.	32	10%	38	12%	70	23%	241	77%	-171
Create a land donation, land acquisition, or land banking program. (Town owns 15 acres of land with no future designated use currently)	45	14%	26	8%	71	22%	246	78%	-175

3. Remove Housing Barriers for People Who Often Encounter Them									
Draft Strategy	**Total Yes (count)**	**Total Yes (%)**	**Total Neutral (count)**	**Total Neutral (%)**	**Total Yes + Neutral (count)**	**Total Yes + Neutral (%)**	**Total No (count)**	**Total No (%)**	**Total Yes + Neutral - Total No**
Create a centralized Town webpage that provides links to regional housing provider programs that serve Superior residents.	147	47%	69	22%	216	70%	94	30%	122
Support programs and organizations that assist older adults with their housing needs.	152	48%	56	18%	208	66%	106	34%	102
Promote weatherization assistance programs that help low-income residents with energy-saving repairs.	153	49%	48	15%	201	64%	113	36%	88
Explore programs and partnerships, such as the Boulder-Longmont Housing Rehabilitation Program, to support housing rehabilitation to help income and asset-qualified homeowners fix problems in their homes such as roofing, plumbing, heating, electrical, etc.	157	50%	43	14%	200	64%	114	36%	86
Explore incentive programs and partnerships that promote the creation of senior housing.	127	39%	73	22%	200	62%	125	38%	75
Incentivize or explore existing programs (Boulder-Longmont Accessibility Program) that makes a home more accessible for income and asset-qualified renters or homeowners with a disabled or elderly family member.	136	43%	55	18%	191	61%	123	39%	68
Remove language barriers in accessing housing resources and information by using technological solutions and/or partnering with culturally specific organizations.	121	39%	59	19%	180	58%	133	42%	47
Support and/or partner with mission-driven affordable housing providers, such as Trailhead Community to provide affordable housing for people with intellectual disabilities in the Town or region.	87	28%	88	29%	175	57%	133	43%	42

3. Remove Housing Barriers for People Who Often Encounter Them									
Advocate for and support existing regional and state tenant protection programs that serve to improve outcomes for renters such as: - Provide ample notice periods for rent increases; lease terminations; and the need to vacate due to renovations. - Prohibit discrimination based on source of income. - Require landlords to provide a summary of tenant's rights.	126	40%	51	16%	177	57%	136	43%	41
Form partnerships and work with culturally specific organizations to promote the availability of programs, incentives, and housing availability.	104	34%	68	22%	172	56%	135	44%	37
Explore land use policy changes to support the development of housing for seniors.	119	38%	56	18%	175	55%	142	45%	33
Support programs and organizations that assist IDD with their housing needs.	87	28%	78	25%	165	53%	144	47%	21
Evaluate the Town's Group Homes regulations to identify barriers to group home development.	71	23%	66	21%	137	44%	175	56%	-38
Modify or increase the three unrelated people occupancy cap to create greater housing choices for renters.	82	26%	45	14%	127	40%	192	60%	-65

HB21-1271 Qualifying Strategies for IHOI and IHOP grant programs

1. **The use of vacant publicly-owned real property** within the local government for the development of affordable housing
2. **Subsidize or Reduce Fees:** The creation of a program to subsidize or otherwise reduce local development review or fees, including but not limited to building permit fees, planning waivers, and water and sewer tap fees, for affordable housing development
3. **Expedited Review for Affordable Housing:** The creation of an expedited development review process for affordable housing aimed at households the annual income of which is at or below 120% of the area median income of households of that size in the county in which the housing is located
4. **Expedited Review for Commercial Conversions:** The creation of an expedited development review process for acquiring or repurposing underutilized commercial property that can be rezoned to include affordable housing units, including the preservation of existing affordable housing units
5. **Density Bonus:** The establishment of a density bonus program to increase the construction of units that meet critical housing needs in the local community
6. **Submetering:** With respect to water utility charges, the creation of processes to promote the use of sub-metering of utility charges for affordable housing projects and the creation of expertise in water utility matters dedicated to affordable housing projects
7. **Subsidize Infrastructure:** With respect to infrastructure, the creation of a dedicated funding source to **subsidize infrastructure costs** and associated fees related to publicly owned water, sanitary sewer, storm sewers, and roadways infrastructure
8. **Granting duplexes, triplexes, or other** appropriate multi-family housing options as a use by right in single-family residential zoning districts
9. **Affordable Housing as a Use by Right:** The classification of a proposed affordable housing development as a use by right when it meets the building density and design standards of a given zoning district
10. **ADUs:** Authorizing accessory dwelling units as a use by right on parcels in single family zoning districts that meet the safety and infrastructure capacity considerations of local governments
11. **PUDs:** Allowing planned unit developments with integrated affordable housing units
12. Allowing the development of **small square footage** residential unit sizes
13. **Reduced Parking:** Lessened minimum **parking** requirements for new affordable housing developments
14. The creation of a **land donation, land acquisition, or land banking** program
15. **An inclusionary zoning** ordinance (per CRS 29-20-104(1))
16. **Other** novel, innovative, or creative approaches to incentivize affordable housing development

Note: The list of strategies above are based on HB21-1271, the legislation that created this program.

HOUSING NEEDS ASSESSMENT
TOWN OF SUPERIOR

December 2023

Prepared for: Town of Superior

Final Report

ECONorthwest
ECONOMICS · FINANCE · PLANNING

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Executive Summary

The rising housing prices in the Boulder County region impact all communities differently, and each community is searching for solutions tailored to their specific challenges. Superior faces similar issues to other regional communities, including the unaffordability of rental and homeownership options, increasing construction costs, and limited available land. However, Superior also has its own distinct challenges that necessitate focused solutions.

An essential component of Superior's solutions is this Housing Needs Assessment (HNA) report, which synthesizes background data and information to comprehend Superior's current demographic and housing market conditions. The HNA examines various housing-related factors, including income, employment, population, household characteristics, housing costs, and affordability. The HNA serves as a foundation for the development of the housing strategic plan.

The following section summarizes the most salient findings of this housing needs assessment.

Who Lives in Superior Today?

The population of Superior is generally younger, and most households consists of families with children.

- Superior's population skews younger, with the largest cohort being residents under 19 years of age (30 percent) followed by those 25 to 44 years old (29 percent).
- Approximately 40 percent of households are couples with children, with half of Superior households comprising 3 or more persons, indicating that these household characteristics are of families.

Superior's senior population is rapidly growing. This growth is unlikely to slow as millennials and Gen Xers grow older.

- Seniors aged 65 years and older experienced the fastest growth since 2011, increasing by 246 percent. This notable increase in the population aged 65 years and older suggests that Superior is experiencing a substantial aging trend. This could be due to factors such as improved health care, an attractive environment for retirees, families aging in place, or an influx of older adults seeking a peaceful lifestyle.
- Millennials and Gen Xers represent about 57 percent of Superior's population. As this population ages, Superior's senior population will continue to grow.

Renter households are typically smaller in size (1 and 2-person households) and generally live in apartments.

- About 62 percent of the renter-occupied housing in Superior is occupied by households with 1 to 2 persons.
- Owner-occupied housing is generally occupied by families with 3 or more persons.

Superior is an affluent community where households have one of the highest median household incomes in the County.

- In 2021, Superior had a median household income of $131,000—the second-highest median household income when compared to the following comparison cities of Erie, Lafayette, Louisville, Longmont, and Boulder.
- Incomes for owner households are generally higher than renter households.
- The median household income of renters and owners in Superior is the highest when compared to Erie, Lafayette, Louisville, Longmont, and Boulder.

Superior's population has grown to be more racially and ethnically diverse.

- While the majority (70%) of Superior's population identify as White, most racial and ethnic groups have increased since 2011. The Asian population is the second-largest racial group (17%), followed by the Hispanic population (9%).
- The Black or African American population was the only racial group that experienced a decrease since 2011.

What Are the Current Housing Conditions in Superior?

The majority of Superior's housing stock is single-family detached—with limited diversity of housing types.

- The majority (60%) of housing inventory in Superior is single-family detached. Superior primarily built single-family homes throughout the 2000s and 2010s. Only starting in 2020 did multifamily building permits outnumber single-family permits.

The Marshall Fire has further exacerbated the lack of available housing in Superior, while demand for housing is high and overall housing vacancy is very low.

- The Marshall Fire of 2021 destroyed 390 residential properties and 4 commercial properties.

- Superior had a housing vacancy of 2.5 percent in 2021—one of the lowest compared to Erie, Lafayette, Louisville, Longmont, and Boulder. For comparison, Boulder County had a housing vacancy of 5.9 percent in 2021.

Homeownership rates have fallen in Superior, while more households tend to rent.

- In Superior, homeownership rates have decreased 10 percent since 2010, while homeownership rates remained stable in Boulder County and Colorado.
- The share of Superior households who rent increased from 30 percent in 2011 to 40 percent in 2021. This underscores the significance of having rental housing that is both of good quality and reasonably priced.

Incomes have not kept pace with the rising housing costs. Housing attainability in Superior has become challenging for many residents.

- While a household earning 100 percent of the area median income ($144,100) can afford the average rent, they cannot afford to purchase a home at the median price ($724,300). A Superior household would need to make $181,000 or more to afford the median-priced home in 2023. This suggests that higher-income households likely have a better chance of homeownership while lower and median-income households might be limited to renting.
- The inability of a moderate-income household to afford the median-priced home raises questions about the potential barriers to homeownership in Superior. Factors such as high down payment requirements, stricter mortgage lending criteria, and rising home prices relative to income growth can make it difficult for many households to enter the homeownership market.
- In 2021, about 40 percent of renter households in Superior were considered cost burdened. This means that these households are spending 30 percent or more of their annual income on housing costs.

What Types of Housing Will Future Residents Need?

Superior needs a diversity of housing types to support the needs of its existing residents and those who are employed in Superior but can't afford to live here. Increasing the supply of both renter and ownership product units is important for Superior.

- If the demand for housing, particularly for homeownership, exceeds the available supply, it can drive up home prices and make it challenging for households with moderate incomes to purchase a home. Similarly, if the demand for rental housing

exceeds the available supply, it can drive up rent prices and price out households that rent in Superior.

- Downtown Superior, a key growth area, has recently started construction and has built several hundred housing units of diverse housing types. Some future housing needs can be met by the new homes built in Downtown Superior while also looking for strategic locations for infill development.

As Superior's population ages, there will be a growing need for housing to accommodate this demographic group.

- Superior's aging population will need housing that meets various household needs such as wanting to downsize (smaller housing units), aging in place (adaptable homes and nearby services), or multigenerational living (attached or detached accessory dwelling unit).

Superior will have more middle-aged millennials wanting to get into the homeownership market.

- Homeownership for millennials will increase as they age. As a result, there will be a demand for starter homes and relatively affordable types of ownership and rental housing.
- Additionally, to accommodate the housing needs for this population group, there will need to be more one- and two-bedroom housing units and housing near major employment centers and services.

1. Introduction

1.1 Purpose and Context

Across Boulder County and beyond, the rising cost of renting and buying a home has created major housing challenges, especially in locations where housing supply hasn't kept pace with demand. Historically, Superior has enjoyed a relatively affordable housing market, but housing costs are also increasing here while supply is low. For example, as of June 2023, the average home sales price in Superior was $724,000, with homes selling in around 32 days. The homes lost to the Marshall Fire in 2021 further exacerbated our tight housing market.

To address this growing issue, the Town of Superior is conducting research to gain a better understanding of the housing needs and gaps specific to Superior residents. Through this research and engagement process, the Town aims to gather the necessary information and analysis to develop strategies and actions that will culminate in a plan to guide the Town's work in the coming years.

A critical and initial component of this work is the Housing Needs Assessment (HNA) that provides the data and analysis required to understand Superior's existing conditions and needs. The Housing Needs Assessment looks at many factors related to housing in Superior—such as income and employment, population and household characteristics, and housing costs and affordability—to provide a clear picture of the state of housing in Superior. The Housing Needs Assessment serves as a foundation for the development of the housing strategic plan.

1.2 Organization of This Report

The remainder of this document is organized into the following sections:

- **Section 2. Economic Trends and Conditions** summarizes key components of Superior's economy such as employment trends, wages, commute patterns, and household income.
- **Section 3. Demographic Profile** describes Superior's household characteristics and change over time, which is important for understanding resident's housing needs.
- **Section 4. Housing Profile and Market Trends** summarizes Superior's housing market, including housing supply, availability and vacancy, and development trends.

- **Section 5. Housing Attainability** summarizes housing costs in Superior and describes the different price points that households can afford based on area median incomes and wages.
- **Section 6. Marshall Fire Recovery** describes the Town's efforts to rebuild after the devastating Marshall Fire.
- **Section 7. Population Forecast** summarizes population forecasts in the next 20 years for Superior.
- **Section 8. Future Housing Need** summarizes the future housing need necessary to accommodate future population growth.

2.Economic Trends and Conditions

This section discusses key components of Superior's economy, which affect the demand for and cost of housing. The section summarizes Superior's employment trends, wages, commute patterns, household incomes, and other labor market indicators.

Key Findings

Superior is an affluent community where households have one of the highest median household incomes in the County.

- In 2021, Superior had a median household income of $131,000—the second-highest median household income when compared to Erie, Lafayette, Louisville, Longmont, and Boulder.
- Incomes for owner households are generally higher than renter households.
- The median household income for renters and owners in Superior is the highest when compared to Erie, Lafayette, Louisville, Longmont, and Boulder.

Continued employment growth linked to housing choices for large and growing sectors of the workforce.

- Between 2010 and 2020, Superior added 902 jobs, an increase of 51 percent. In comparison, Boulder County added 23,471 jobs, an increase of 18 percent.
- Superior's employment is concentrated in two industries: services and retail. Combined, these two industries make up approximately 71 percent of the total jobs in Superior.

- The services industry generally employs people with high skills and, as a result, wages earned in this industry average $84,000. The retail industry employs many lower-wage positions, with the average annual wage in Boulder County being $39,000. While a critical part of the economy, residents working in the retail industry may struggle to pay for housing in Superior where housing costs are high.

Most Superior jobs are filled by commuters who live outside of town, while most Superior residents commute elsewhere to work.

- Superior has a commute influx where 92 percent of jobs (2,462 positions) are filled by individuals who commute from locations outside of Superior. This could suggest that workers do not earn enough to afford to live in Superior.
- Superior residents commute elsewhere for work. A significant number of residents (5,846 individuals) from Superior travel to other counties for work. This highlights that residents commute long distances for work within the Denver Front Range region.

2.1 Income and Employment

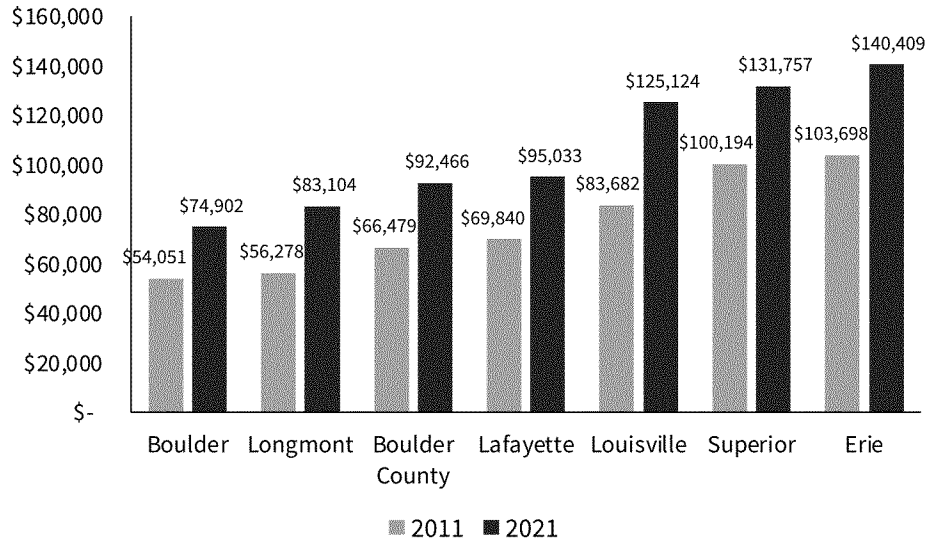
The ability of a household to acquire adequate housing is related to household income, whether earned or from other sources. Household income is oftentimes the crucial factor in evaluating the size and type of housing available for any given household. Household income can vary greatly across many demographic factors, including race, gender, tenure, and household type. While higher-income households have more discretionary income to spend on housing, low- and moderate-income households often face limited choices in the housing they can afford.

2.1.1 Household Median Income, 2011 and 2021

Since 2011, Superior has had the second-highest median household income when compared to the cities of Erie, Lafayette, Louisville, Longmont, and Boulder. In 2021, Superior had a median household income of $131,757. This is substantially higher than the median household income of $92,466 in Boulder County. Erie had the highest median household income at $140,409.

Exhibit 1. Median Household Income, Superior and Comparison Cities, 2011 and 2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



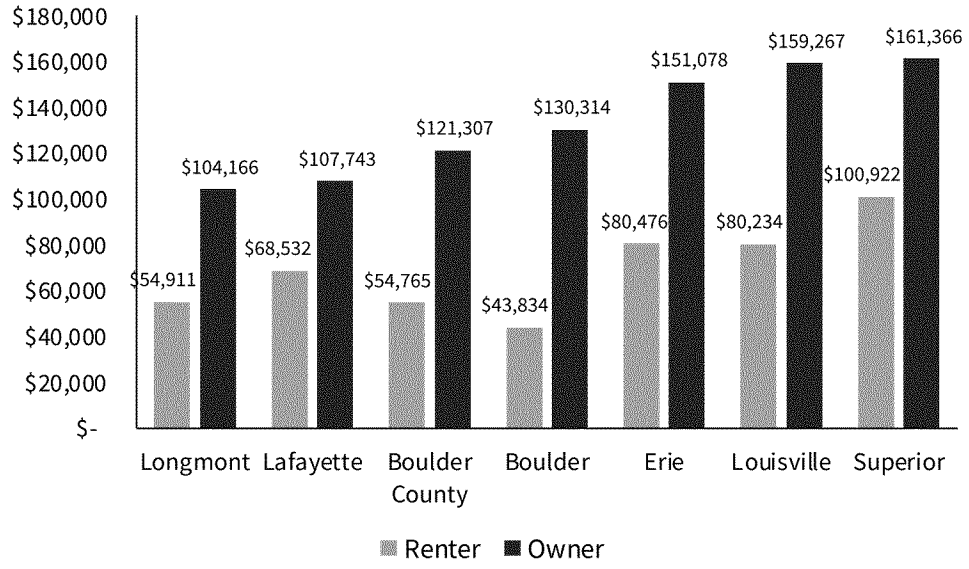
2.1.2 Renter Median Household Income vs Owner Median Household Income, 2021

Analyzing income disparity between renters and homeowners helps identify potential disparities in housing affordability. For example, if the median income of renters is significantly lower than that of homeowners, it might indicate that a larger portion of renter incomes are being dedicated to housing costs, potentially highlighting affordability issues for renters.

Superior has the highest renter and owner median household income when comparing it to the other comparison cities. Superior's renter median household income was $100,922 in 2021, while the owner median household income was $161,366; these trends indicate that Superior is an affluent community.

Exhibit 2. Renter Median Household Income vs Owner Median Household Income, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

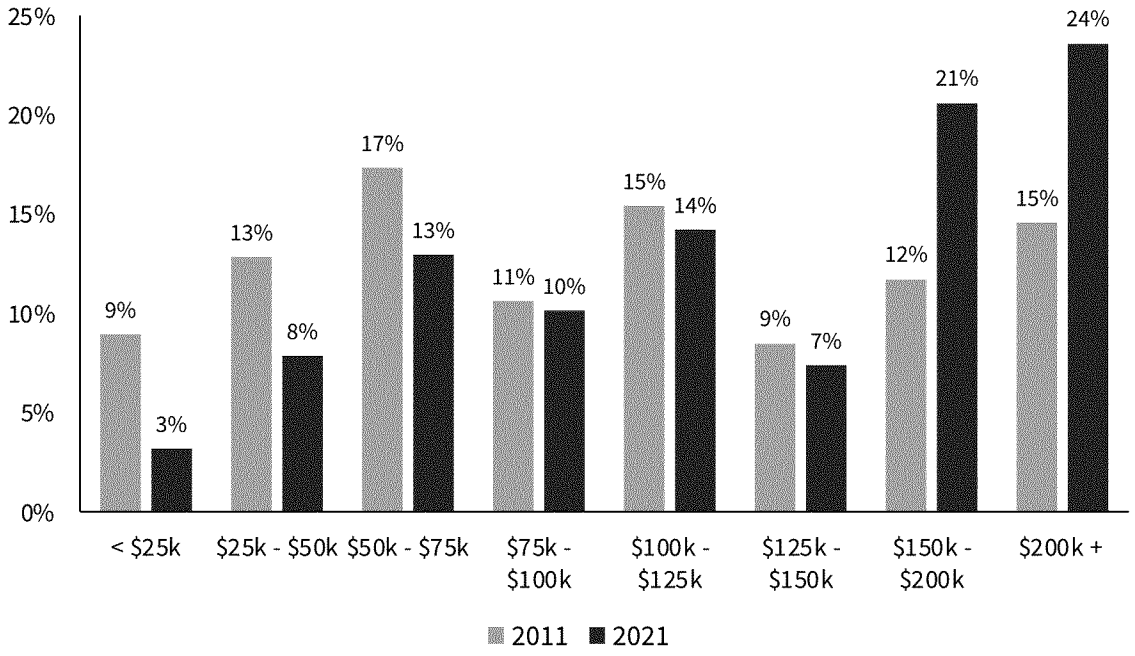


2.1.3 Household Income Distribution in Superior, 2011 and 2021

Since 2011, the share of households in Superior with the highest incomes has grown. In 2021, 45 percent of households had incomes greater than $150,000, compared to 27 percent in 2011. The share of households with incomes less than $75,000 has declined from 39 percent in 2011 to 24 percent in 2021. The share of households with moderate incomes has remained relatively stable during this period. Note that these amounts are not adjusted for inflation. The increase in households making over $150,000 and the decrease in households making $75,000 or less could indicate housing affordability challenges where rising housing costs and living expenses might be pushing out lower-income households.

Exhibit 3. Household Income Distribution, Superior, 2011 and 2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



* These incomes are in nominal dollars for each year. They are not adjusted for inflation.

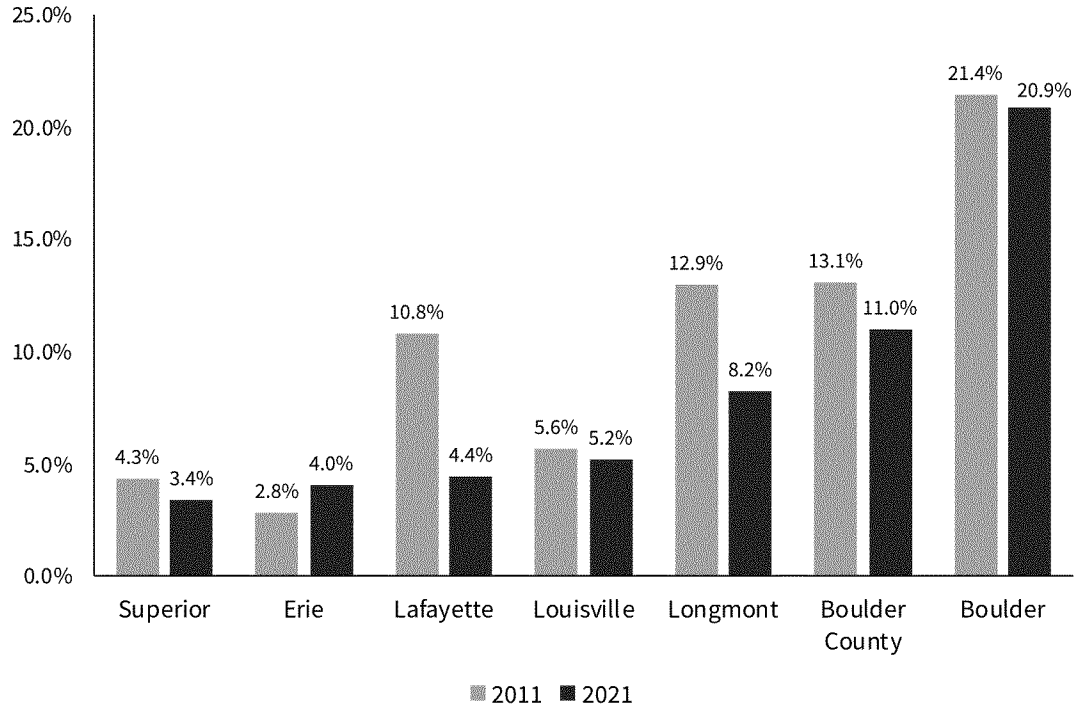
2.1.4 Poverty Rate

Monitoring the poverty rate over time is critical for assessing a community's needs and understanding hardships. A substantial change in the poverty rate over time can be a sign of an important trend, such as a deepening or an amelioration of economic distress or changes in the composition of an area's population due to a shortage of affordable housing.

In Superior, the share of people in poverty decreased from 4.3 percent in 2011 to 3.4 percent by 2021. Similarly, Boulder County and several comparison cities experienced a decline in the share of residents living in poverty. The overall decline in poverty rates in Superior and Boulder County indicate that there is a strong job market, which has provided stable employment opportunities for residents as well as an educated and skilled workforce.

Exhibit 4. Share of Population Living Below Poverty Level, Superior and Comparison Cities, 2011-2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



2.2 Employment Trends

2.2.1 Employment by Sector

Employment growth accompanied population growth in Superior between 2010 and 2020, especially in the sectors of manufacturing; education; and wholesale trade, transportation, and utilities (WTU). Between 2010 and 2020, employment in Superior grew 51 percent from 1,779 jobs to 2,681 jobs while Boulder County's employment grew 18 percent from 128,271 jobs to 151,742 jobs.

Between 2010 and 2020, employment in the goods-producing sector grew 364 percent, representing about 13 percent of the total employment in Superior. Services-producing jobs, which make up most of the jobs in Superior, grew 37 percent.

Services is the primary employment concentration in Superior, accounting for 48 percent of total jobs, and is mostly driven by the town's rapid population growth. Retail is the second-largest concentration of jobs in Superior, representing 23 percent of jobs in the town.

The finance, insurance, and real estate sector experienced a slight decline in jobs between 2010 and 2020.

Exhibit 5. Employment by Industry in Superior, 2010 and 2020

Source: Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employer Statistics (LODES)

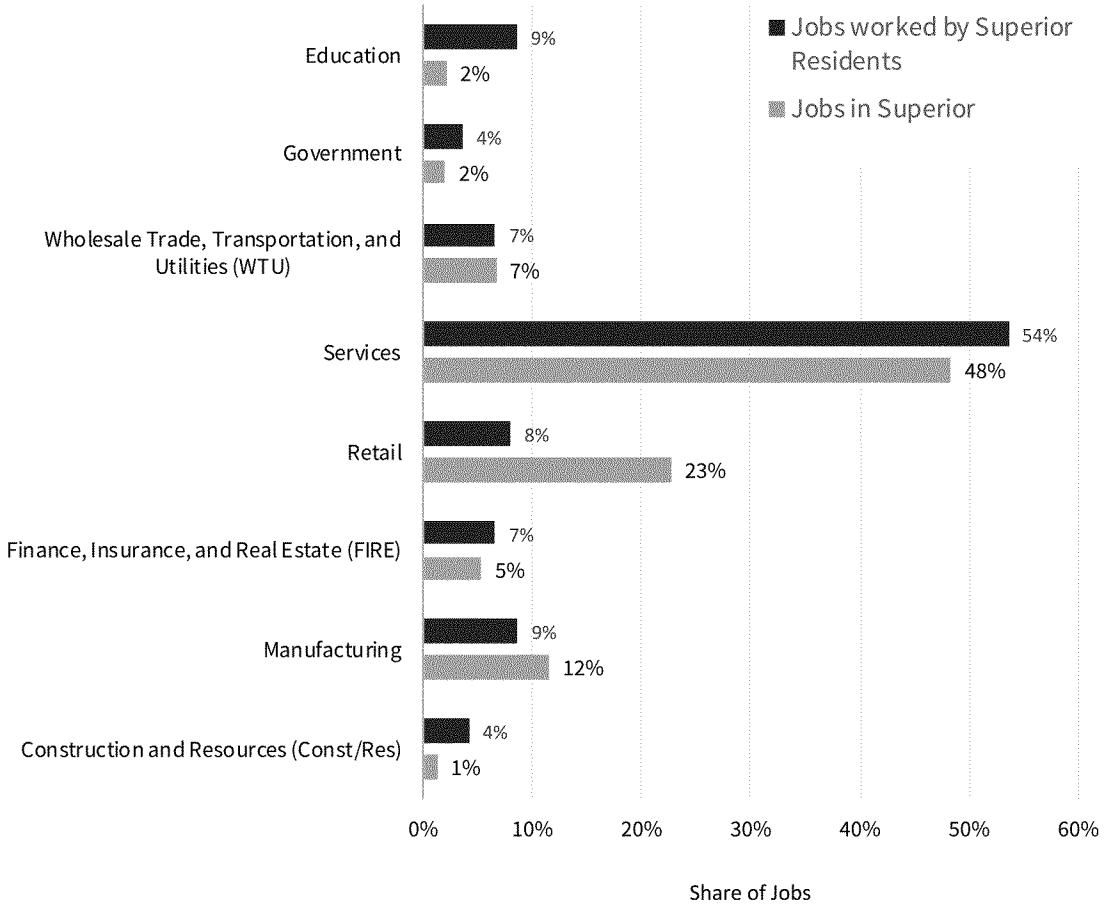
Industry	2010		2020		Percent Change
	Number	Percent	Number	Percent	2010-2020
Goods Producing	**74**	**4%**	**343**	**13%**	**364%**
Construction and Resources (Const/Res)	23	1%	34	1%	48%
Manufacturing	51	3%	309	12%	506%
Services Producing	**1,705**	**96%**	**2,338**	**87%**	**37%**
Finance, Insurance, and Real Estate (FIRE)	150	8%	143	5%	-5%
Retail	447	25%	609	23%	36%
Services	989	56%	1,296	48%	31%
Wholesale Trade, Transportation, and Utilities (WTU)	54	3%	179	7%	231%
Government	51	3%	54	2%	6%
Education	14	1%	57	2%	307%
Total Employment	**1,779**		**2,681**		**51%**

The exhibit below shows the jobs that Superior has and where residents work. Over half of Superior residents work in the services sector, where a typical worker earns approximately $84,000 annually in Boulder County. The other major industries where superior residents work include education, manufacturing, and retail. Residents working in education and retail on average earn $44,000 or less annually, while those working in manufacturing earn approximately $88,000 annually.

The services sector includes industries in information; professional, scientific, and technical services; management of companies and enterprises; administration and support; waste management and remediation; health care and social assistance; arts, entertainment, and recreation; and accommodation and food services.

Exhibit 6. Employment in Superior and Where Residents Work, 2020

Source: Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employer Statistics (LODES)



Overall, the County's employment has grown by 18 percent, an increase of 23,471 jobs. Compared to Superior, employment in Boulder County is concentrated more heavily in services, which makes up 59 percent of total jobs. The industries with the most growth between 2010 and 2020 include wholesale trade, transportation, and utilities (33 percent) and education (48 percent). As in Superior, the finance, insurance, and real estate sector across the County declined slightly, at 3 percent.

Exhibit 7. Average Employment by Industry in Boulder County, 2010-2020

Source: Bureau of Labor Statistics

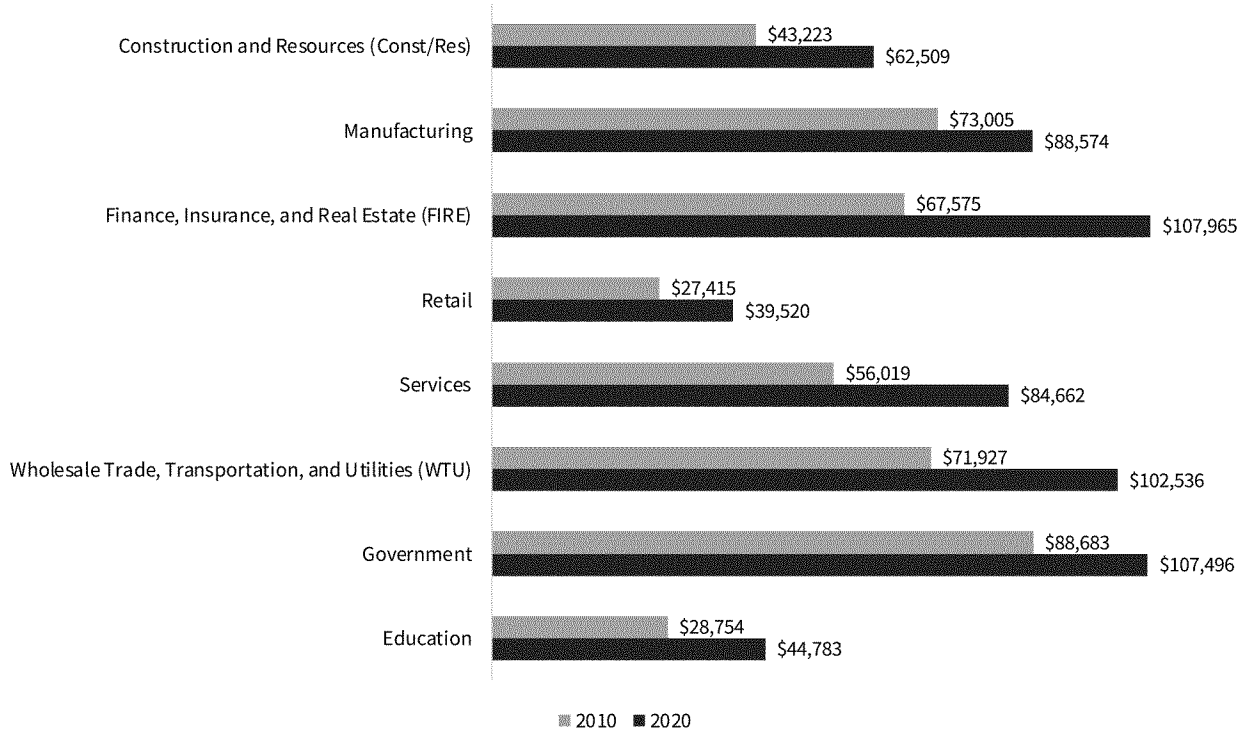
Industry	2010		2020		Percent Change
	Number	Percent	Number	Percent	2010-2020
Goods Producing	**20,173**	**16%**	**26,300**	**17%**	**30%**
Construction and Resources (Const/Res)	4,971	4%	6,186	4%	24%
Manufacturing	15,202	12%	20,114	13%	32%
Services Producing	**108,098**	**84%**	**125,442**	**83%**	**16%**
Finance, Insurance, and Real Estate (FIRE)	6,920	5%	6,716	4%	-3%
Retail	15,181	12%	16,551	11%	9%
Services	75,536	59%	88,922	59%	18%
Wholesale Trade, Transportation, and Utilities (WTU)	6,275	5%	8,332	5%	33%
Government	2,319	2%	2,153	1%	-7%
Education	1,867	1%	2,768	2%	48%
Total Employment	**128,271**		**151,742**		**18%**

2.2.2 Average Wages in Boulder County, 2010-2020

In Boulder County, average annual wages in the finance, insurance, and real sector have grown the most since 2010 (by 60 percent) despite the decline in overall employment in these categories, as shown in Exhibit 7. In 2020, these jobs had the highest average annual wage at $107,965. The government and wholesale, trade, and utilities (WTU) industries also have annual wages greater than $100,000 as of 2020. Manufacturing and government jobs in Boulder County experienced the lowest wage increase since 2010 (21 percent). Average wage data is only available at the County level.

Exhibit 8. Average Wages by Industry in Boulder County, 2010-2020

Source: Bureau of Labor Statistics



2.2.3 Education Attainment

A community with a significant percentage of college-educated individuals often sees a concentration of advanced-skill jobs with higher pay, leading to higher household incomes.

A large share of Superior's population is college educated. As of 2021, 40 percent of Superior residents had a bachelor's degree and 37 percent had a graduate degree. Only 7 percent of adult residents had a high school degree or had not completed high school.

Exhibit 9. Education Attainment in Superior, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

Education Attainment	Total	Percent
Less than High School Degree	161	2%
High School Degree	421	5%
Some College or Associate Degree	1,397	16%
Bachelor's degree	3,494	40%
Advanced Degree	3,222	37%

2.2.4 Commuting Patterns

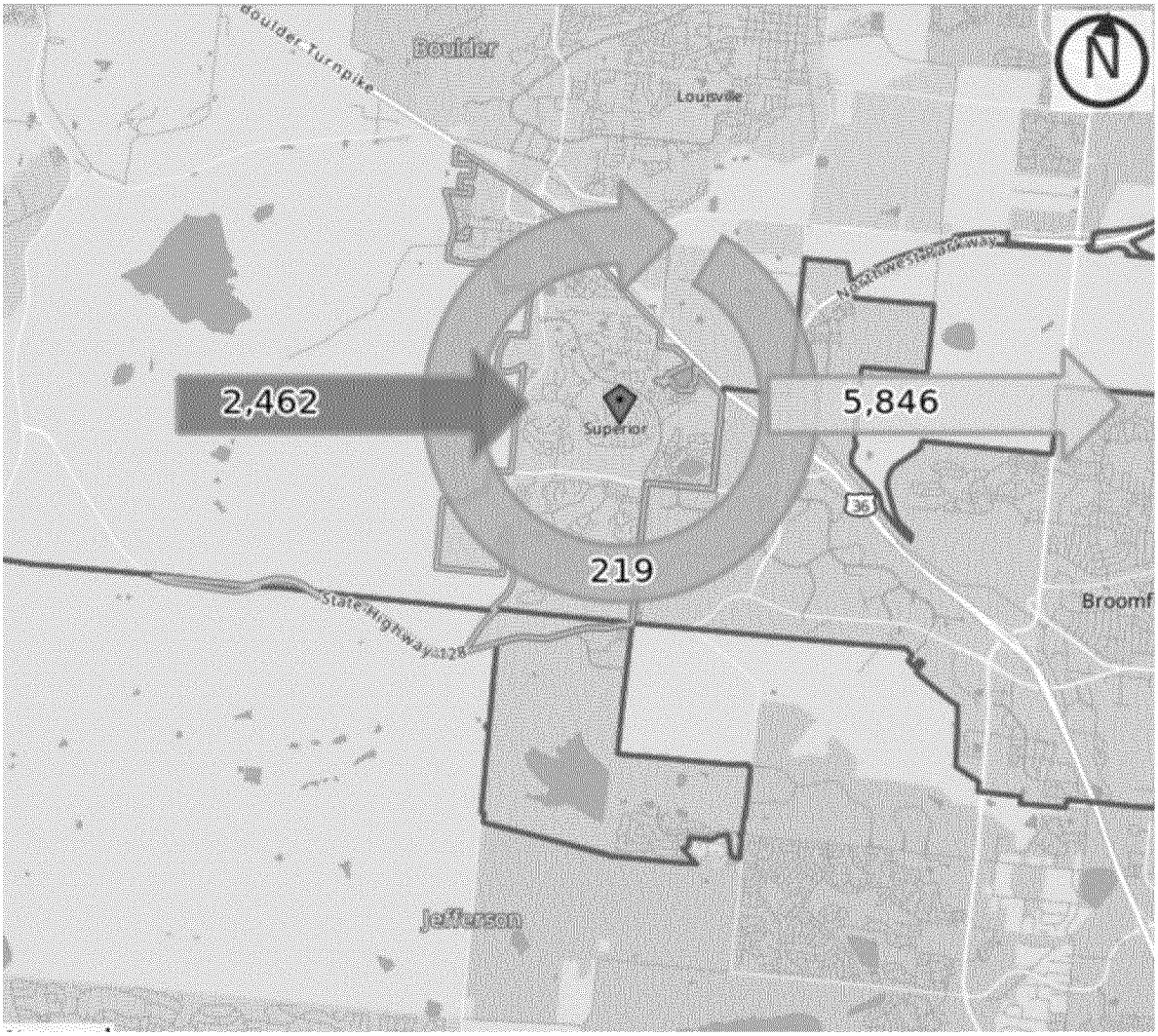
According to the Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employer Statistics (LODES) program, 2,462 of the 2,681 jobs located in Superior (92 percent) are held by commuters coming in from outside of the town. The other 219 jobs (8 percent) are held by residents who also live in Superior. An additional 5,846 jobs are held by residents of Superior who travel to another county for work.

The top 5 counties where residents of Superior travel for work include the following:

39.1%	**17.3%**	**11.0%**	**8.7%**	**7.8%**
2,369	1,050	669	526	473
Boulder County	Denver County	Jefferson County	Adams County	Broomfield County

Exhibit 10. Commuting Patterns, Superior, 2020

Source: Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employer Statistics (LODES)



3. Demographic Profile

This section provides an overview of Superior's demographics, which provides a foundational context for the housing market profile and conditions. The discussion is organized around population growth and forecast, household characteristics, and race and ethnicity.

Key Findings

Key highlights in Superior's demographic trends include:

Superior grew steadily in the past decade, and forecasts indicate that it will grow at a slightly faster rate over the next two decades.

- Between 2011 and 2021, Superior grew by 482 new residents. Compared to other cities in Boulder County, Superior experienced the smallest population growth by percentage.
- In the next two decades, Boulder County is anticipated to grow by nearly 52,000 people, which will continue to add pressure for additional housing in Superior to accommodate a portion of this growth.

The population of Superior is generally younger, and most households consists of families with children.

- Superior's population tends to skew younger, where the population under 19 years of age comprises the largest cohort of residents (30 percent) followed by those 25 to 44 years old (29 percent).
- Approximately 40 percent of households are couples with children. Half of Superior households have 3 or more persons, indicating that these household characteristics are of families.

Superior's senior population is rapidly growing. This growth is unlikely to slow as millennials and Gen Xers grow older.

- Seniors aged 65 years and older experienced the fastest growth since 2011, increasing by 246 percent. This notable increase in the population aged 65 years and older suggests that Superior is experiencing a substantial aging trend. This could be due to factors such as improved health care, an attractive environment for retirees, families aging in place, or an influx of older adults seeking a peaceful lifestyle.
- Millennials and Gen Xers represent about 57 percent of Superior's population. As these populations age, Superior's senior population will continue to grow.

Superior's population has grown to be more racially and ethnically diverse.

- While the majority of Superior's population identify as White (70 percent), most racial and ethnic groups have increased since 2011. The Asian population is the second-largest racial group (17 percent), followed by the Hispanic population (9 percent).

- The Black or African American population was the only racial group that experienced a decrease since 2011.

3.1 Household Characteristics

The characteristics of a community's households impact the type of housing needed in that community. This section discusses the household characteristics affecting the housing needs of Superior residents.

The U.S. Census Bureau defines a household as all persons who occupy a housing unit, which may include families, single persons, and unrelated persons sharing a housing unit (such as roommates). Persons residing in group quarters such as dormitories or retirement homes are not considered households.

The characteristics of a community's households serve as important indicators of the type and size of housing needed in the town. For instance, single-person households often occupy smaller apartment units or condominiums, such as studios, one-bedroom units, or accessory dwelling units (ADUs). Married couples often prefer larger single-family homes, particularly if they have children. This underscores the need to provide a diversity of housing opportunities.

3.1.1 Population and Households

Population growth and household formation are the primary drivers of demand for housing. The rate of population growth and household characteristics heavily influence the demand for specific housing types.

Exhibit 11 shows population growth in Superior and comparison cities within Boulder County between 2011 and 2021. Since 2011, Superior has added 481 new residents. This increase represents the smallest growth among the comparison cities in real terms and the smallest average annual growth rate, at 0.38 percent.

Exhibit 11. Historical Population Growth, Superior and Comparison Cities, 2011-2021

Source: DOLA, Colorado State Demography Office, ECONorthwest

			2011-2021 Change	
	2011	2021	Number	AAGR
Superior	12,572	13,053	481	0.38%
Erie	8,711	13,124	4,413	4.18%

	2011	2021	2011-2021 Change	
			Number	AAGR
Lafayette	24,722	31,035	6,313	2.30%
Longmont	87,390	98,117	10,727	1.16%
Louisville	18,560	20,855	2,295	1.17%
Boulder	100,233	106,978	6,745	0.65%
Boulder County	300,526	329,793	29,267	0.93%

Exhibit 12 represents historical household growth in Superior and comparison cities. Between 2011 and 2021, Superior grew by an estimated 243 households, or a 5 percent increase in total households. This increase was the lowest rate among the comparison cities. In comparison, Erie saw the largest household growth during the same period, at 48 percent (or 1,408 households).

Exhibit 12. Historical Household Growth, Superior and Comparison Cities, 2011-2021

Source: DOLA, Colorado State Demography Office, ECONorthwest

	2011	2021	2011-2021 Change	
			Number	Percent
Superior	4,539	4,781	243	5%
Erie	2,923	4,331	1,408	48%
Lafayette	9,772	12,414	2,642	27%
Longmont	34,004	39,563	5,559	16%
Louisville	7,669	8,618	948	12%
Boulder	46,404	49,299	2,894	6%
Boulder County	121,382	132,009	10,627	9%

3.1.2 Average Household Size

Superior had an average household size of 2.73 in 2021. This is the second-largest average household size when compared to the comparison cities and County. Boulder County had an average household size of 2.38.

Exhibit 13. Average Household Size, Superior and Comparison Cities, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

2.73	3.03	2.50	2.48	2.42	2.17	2.38
Superior	Erie	Lafayette	Longmont	Louisville	Boulder	Boulder County

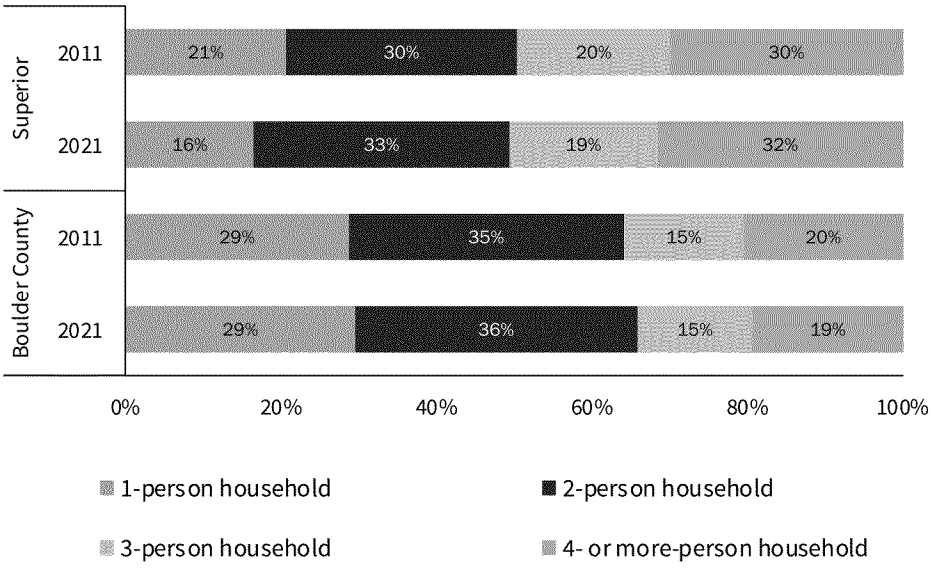
3.1.3 Household Size

The households in Superior comprised of 3 persons and 4 or more persons make up 51 percent of the total households, while 2-person households make up the second-largest household type and make up 33 percent of all households. Between 2011 and 2021, there was a considerable shift in Superior's household size formation. Most notably, 2-person households and those with 4 or more persons increased, while 1-person and 3-person households decreased. This trend could suggest that there are some affordability challenges in Superior for 1-person households or a lack of available and appropriately sized housing.

Compared to Superior, households in Boulder County comprised of 1 or 2 persons make up 65 percent of all households in the County. Households comprised of 3 persons and 4 or more persons make up 35 percent. These trends suggest that households in Superior are typically families with 3 or more persons and couples, while in Boulder County they represent single and couple households.

Exhibit 14. Household Size, Superior and Boulder County, 2011 and 2021

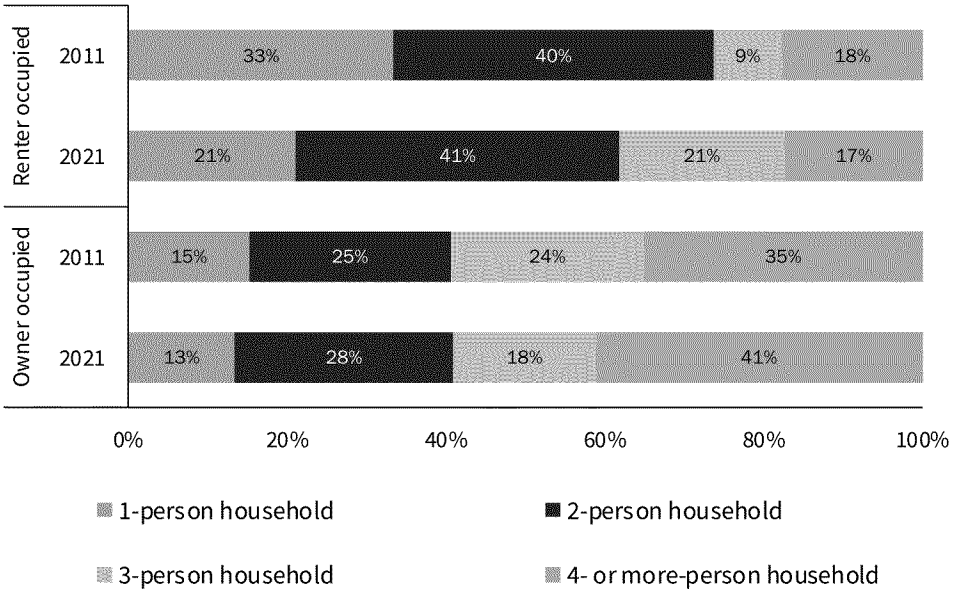
Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



Household size varies widely by tenure in Superior. Renter households make up the majority of 1- and 2-person households (62 percent), while owner households make up the majority of 3- and 4-person households. These household size trends generally track with the trends of the available housing within a community. For example, 1- and 2-person households generally tend to live in apartments while family-sized households tend to live in single-family homes or larger-sized units that accommodate their needs.

Exhibit 15. Household Size by Tenure, Superior, 2011 and 2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates

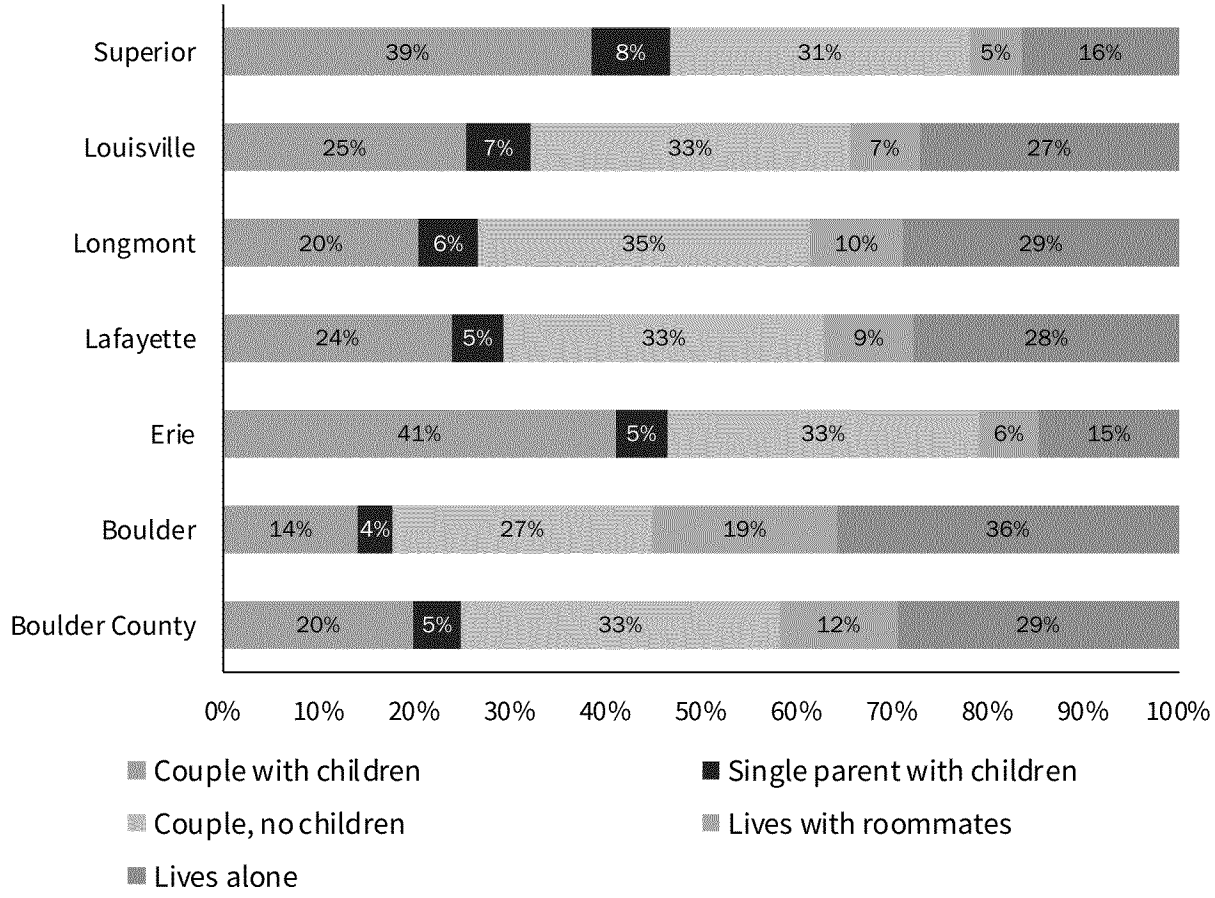


3.1.4 Living Arrangement

Exhibit 16 below shows trends in the living arrangement of Superior households. The majority of Superior households (39 percent) are comprised of a traditional nuclear family consisting of a married couple and their children. The second-largest household type in Superior is couples living together with no children. These trends further strengthen that Superior households are mostly families with children. One-person households make up the smallest share of households in Superior.

Exhibit 16. Living Arrangement of Households, Superior and Comparison Cities, 2021

Source: American Community Survey (ACS) 2021 5-year estimates



3.1.5 Median Age

Superior	Erie	Lafayette	Longmont	Louisville	Boulder	Boulder County
37	37	39	40	43	37	37

Superior's population is young, with a median age of 37 in 2021. Other jurisdictions like Erie, Boulder, and Boulder County also have a young population, with a median age of 37. Longmont and Louisville have older populations relative to the comparison cities.

3.1.6 Age Distribution

The age characteristics of a community indicate current needs and future trends for housing. Because different age groups have very different housing needs, housing demand correlates to the age of residents. For example, young adult households may choose to occupy apartments, condominiums, and small single-family homes because of affordability, location, and household size/presence of children. Middle-aged adults may prefer larger homes in which to raise families, while seniors may prefer smaller units that have lower costs, less maintenance, and nearby services.

The exhibit below shows the age characteristics of Superior's population. Superior's population generally skews younger. The population under 19 years of age comprises the largest cohort of residents in Superior, followed by adults ages 25 to 44 and 45 to 64, making up 29 and 28 percent of the town's population, respectively. Overall, Superior has maintained a relatively small population of senior adults aged 65 years and older.

In comparison, Boulder County's population skews younger as well with roughly 60 percent of its population spread across those under 19 years old, 20 to 24 years old, and 25 to 44 years old.

Exhibit 17. Age Distribution, Superior and Comparison Cities, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

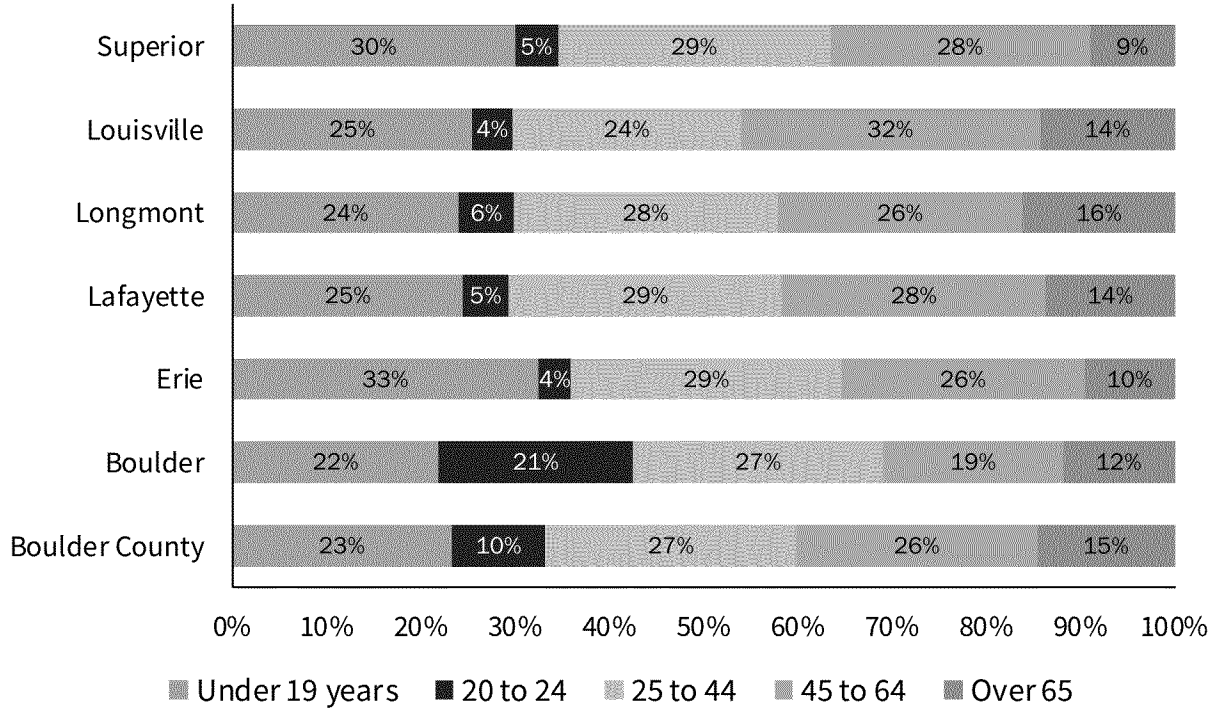


Exhibit 18 below shows how Superior's age distribution has changed over time. Seniors aged 65 years and older experienced the fastest growth since 2011—increasing by 246 percent. This notable increase in the population aged 65 years and older suggests that Superior is experiencing a substantial aging trend. This could be due to factors such as improved health care, an attractive environment for retirees, or seniors who are aging in place. Other notable increases include the age cohort under 19 years old increasing by 10 percent and the age cohort 45 to 64 years old increasing by 25 percent. The 50 percent decline in the 20 to 24 age group could indicate a potential outflow of young adults seeking education, job opportunities, or different living environments. This could also mean that this age group cannot find housing affordable to them in Superior. Boulder County trends for this age group have remained stable between 2011 and 2021.

Exhibit 18. Change in Superior's Age Distribution, 2011-2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates

	2011	2021	2011-2021 Change	
			Number	Percent
Under 19 years	3,616	3,983	367	10%
20 to 24 years	1,200	605	-595	-50%
25 to 44 years	4,092	3,830	-262	-6%
45 to 64 years	2,915	3,656	741	25%
Over 65 years	349	1,209	860	246%

3.1.7 Race and Ethnicity

Most of Superior's population identify as non-Hispanic White. In the past decade, Superior has grown to be more racially and ethnically diverse. Most racial and ethnic groups have increased since 2011. The Black or African American population decreased in the past decade. The Asian population is the second-largest racial group (17 percent), followed by the Hispanic population (9 percent).

Exhibit 19. Race and Ethnicity, 2011 and 2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates

	2011		2021		2011-2021 Change	
	Number	Percent	Number	Percent	Number	Percent
Non-Hispanic White	9,497	78%	9,300	70%	-197	-2%
Black or African American	85	1%	37	0%	-48	-56%
American Indian and Alaska Native	0	0%	86	1%	86	-
Asian	1,501	12%	2,235	17%	734	49%
Native Hawaiian or Pacific Islander	0	0%	9	0%	9	-
Other	0	0%	18	0%	18	-
Two or more races	301	2%	449	3%	148	49%
Hispanic	788	6%	1,149	9%	361	46%

4. Housing Profile and Market Trends

This section summarizes Superior's housing market. It examines housing supply and availability, development trends, and affordability of ownership and rental housing.

A housing profile and housing market analysis are important for understanding housing affordability and demand because they provide valuable information about the current state of the housing market, including the supply of housing units, average cost of rent or homeownership, and demographics of the area, which can help predict future housing demand and need. Projecting future housing need is important to ensure that Superior is planning to provide housing at all income levels for its population—especially those with lower incomes.

For the purposes of this report, unless stated otherwise, the existing supply includes properties impacted by Marshall Fire and the future projections do not include permits and households rebuilding following Marshall Fire. This report assumes these properties rebuild within the 2043 future projected timeline.

Key Findings

Key highlights in Superior's housing profile and market trends include:

The Marshall Fire has further exacerbated the lack of available housing in Superior.

- The Marshall Fire of 2021 destroyed 390 residential properties and 4 commercial properties.
- Superior had a housing vacancy of 2.5 percent in 2021—one of the lowest of the comparison cities of Erie, Lafayette, Louisville, Longmont, and Boulder. For comparison, Boulder County had a housing vacancy of 5.9 percent in 2021.

Superior's housing inventory lacks diversity. Homogeneous new construction is unlikely to support workforce housing needs.

- The majority of housing inventory in Superior is single-family detached (60 percent). Superior has primarily built single-family homes throughout the 2000s and 2010s. Only starting in 2020 did multifamily building permits outnumber single-family permits.
- The share of Superior households who rent increased from 30 percent in 2011 to 40 percent in 2021. This underscores the significance of having rental housing that is both of good quality and reasonably priced.
- Young professional households aged 15 to 34 were the most likely to rent in Superior, while older households 45 to 64 were the least likely to rent.

Incomes have not kept pace with the rising housing costs. Housing attainability in Superior has become challenging for many residents.

- While a household earning 100 percent of the area median income ($144,100) can afford the average rent, they cannot afford to purchase a home at the median price ($724,300). A Superior household would need to make $181,000 or more to afford the median-priced home in 2023. This suggests that higher-income households likely have a better chance of homeownership, while lower and median-income households might be limited to renting.
- The inability of a moderate-income household to afford the median-priced home raises questions about the potential barriers to homeownership in Superior. Factors such as high down payment requirements, stricter mortgage lending criteria, and rising home prices relative to income growth can make it difficult for many households to enter the homeownership market.

- In 2021, about 40 percent of renter households in Superior were considered cost burdened. This means that these households are spending 30 percent or more of their annual income on housing costs.

Increasing the supply of both renter and ownership product units is important for Superior.

- If the demand for housing, particularly for homeownership, exceeds the available supply, it can drive up home prices and make it challenging for households with moderate incomes to purchase a home. Similarly, if the demand for rental housing exceeds the available supply, it can drive up rent prices and price out households that rent in Superior.

4.1 Defining Affordable Housing

Housing affordability refers to the degree to which a household or individual can afford to pay for housing without experiencing financial hardship or sacrificing other essential needs.

According to the U.S. Department of Housing and Urban Development (HUD), affordable housing refers to a residence that a household or family can acquire—either through buying, renting, or other methods—that requires payment of no more than 30% of the household's income. Typically, households paying more than 30 percent of their income for housing are considered cost burdened, while households paying more than 50 percent for housing are considered severely cost burdened.

4.2 Housing Supply

According to the American Community Survey (ACS), Superior had 4,790 housing units as of 2021. Between 2011 and 2021, 193 housing units were added to Superior's housing inventory. These housing units are likely reflected in these developments:

Development	# of Units
Calmante II	33
Coal Creek Crossing	53
Rogers Farm (RM zoned)	27
Downtown/Discovery	80*

**Approximate*

Exhibit 20. Total Housing Units in Superior, 2011 and 2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates

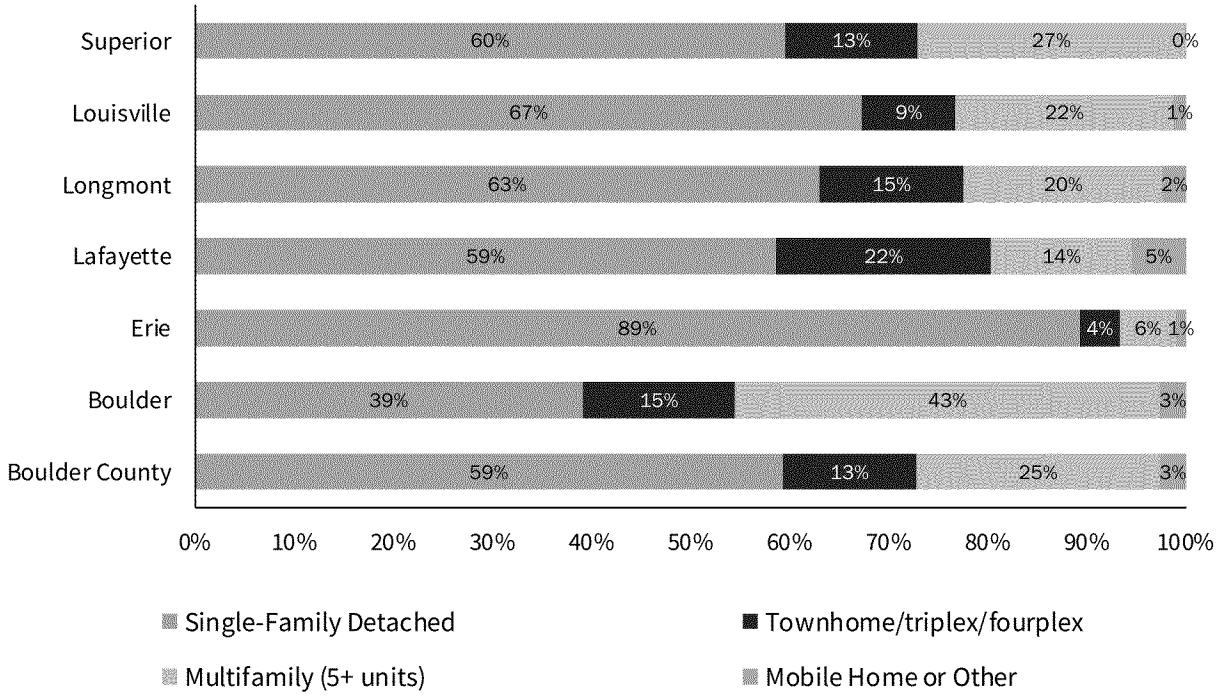
	2011	2021	# Change	AAGR
Housing Units	4,597	4,790	193	0.41%

4.2.1 Existing Housing Inventory by Type

The mix of housing types in Superior is similar to the overall distribution in Boulder County, with 60 percent in the form of single-family detached homes and 13 percent in townhomes and small duplexes, triplexes, and fourplexes. There is a higher share of multifamily units in Superior relative to comparison cities, at 27 percent, second only to Boulder. Less than 1 percent of Superior's housing inventory is mobile homes or other forms.

Exhibit 21. Share of Housing by Building Type, Superior and Comparison Cities, 2021

Source: American Community Survey (ACS) 2021 5-year estimates



4.2.2 Age of Housing Inventory

Housing age can be an important indicator of housing condition within a community. Like any other tangible asset, housing is subject to gradual physical or technological deterioration over time. If not properly and regularly maintained, housing can deteriorate and discourage reinvestment, depress neighboring property values, and eventually impact the quality of life in a neighborhood. Many federal and state programs also use the age of housing as one factor in determining housing rehabilitation needs. Typically, housing over 30 years of age is more likely to have rehabilitation needs that may include new plumbing, roof repairs, foundation work, and other repairs.

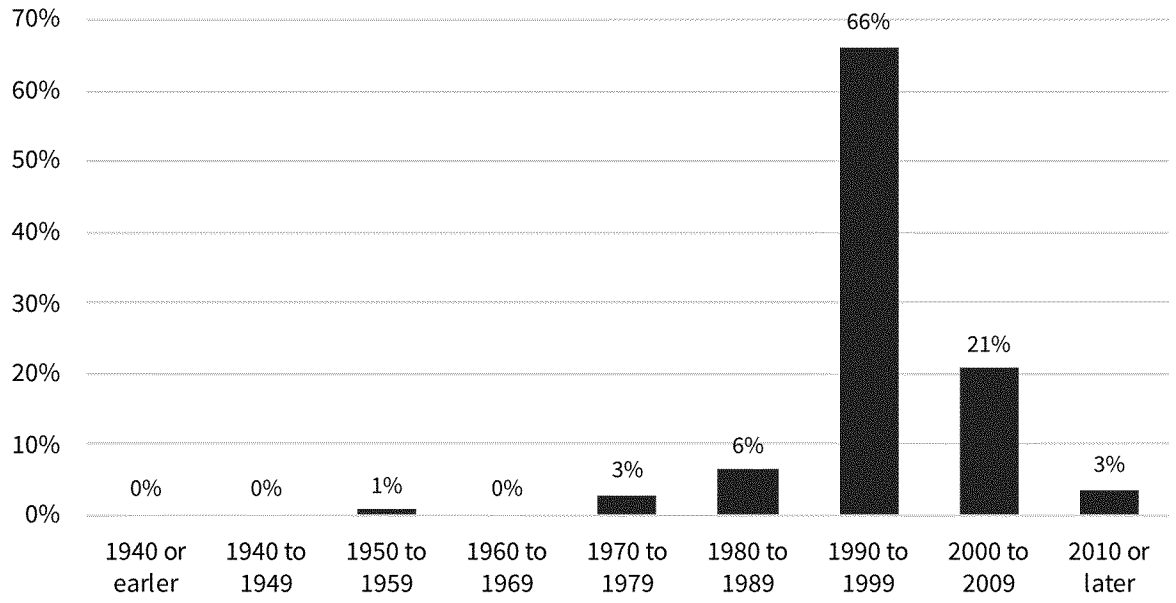
The majority of Superior's current housing units—more than 90 percent—were built in the last 30 years. Most of the housing inventory was built in the 1990s with the development of the Rock Creek Ranch area and expansion of the town boundaries to include the 1,570-acre subdivision.[1] Most of homes older than 30 years were located in Original Town and were destroyed in the Marshall Fire. Units built since 2010 make up a very small share of Superior's

[1] Town of Superior Comprehensive Plan, p. 2–1.

total housing supply. However, the extensive residential construction of Downtown Superior that began in late 2020 is changing the housing makeup of Superior, along with new construction associated with the Marshall Fire recovery. Several new multifamily housing units have been built recently or are under construction, increasing the supply of apartment units and attached housing units.

Exhibit 22. Share of Housing Units by Year Built, Superior, 2021

Source: American Community Survey (ACS) 2021 5-year estimates



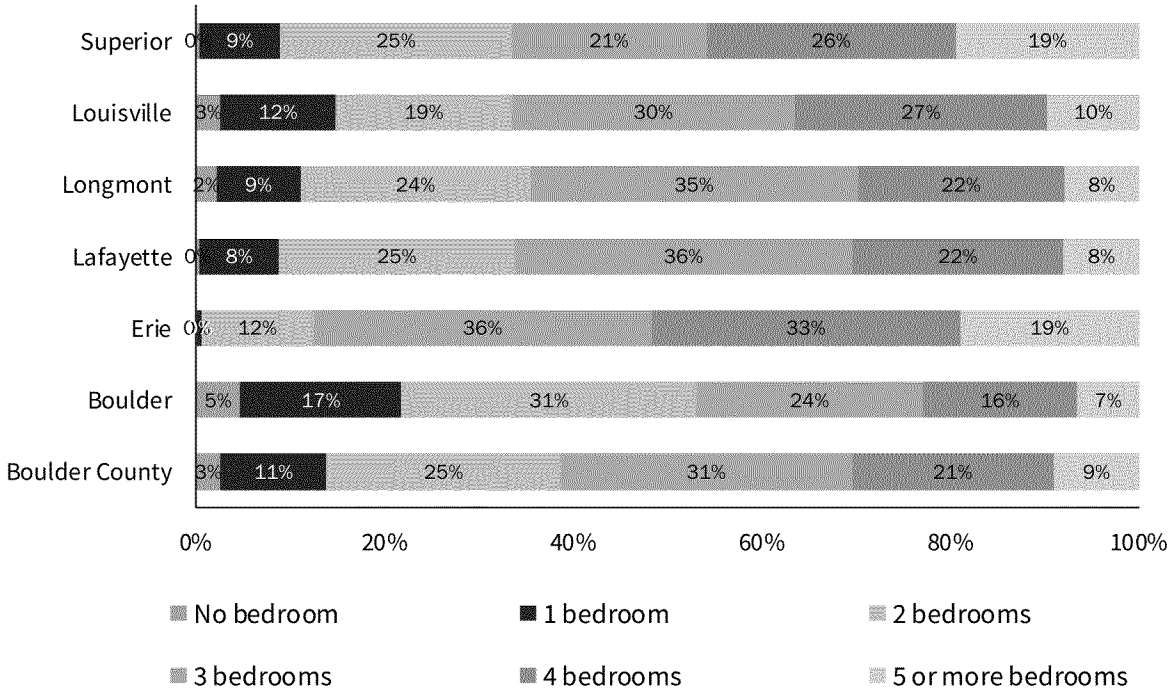
4.2.3 Number of Bedrooms

With single-family detached units as the most common type of housing, it is not surprising that a majority of dwelling units in Superior have three or more bedrooms. A small percentage of Superior's housing stock are studios (no bedroom) or 1-bedrooms. Among comparison cities, Superior has one of the largest shares of homes with five or more bedrooms, at 19 percent. This indicates that most of the single dwelling and multi-dwelling units in Superior are supportive of family households, with a very small share of units supportive for single residents. This limits the pool of units that single households or couples could obtain in Superior's housing market.

Based on recent permit data from the city, the residential market has been building smaller residential units for single households and couples through the development of several studios and 1- and 2-bedroom units.

Exhibit 23. Share of Housing Units by Number of Bedrooms, Superior and Comparison Cities, 2021

Source: American Community Survey (ACS) 2021 5-year estimates



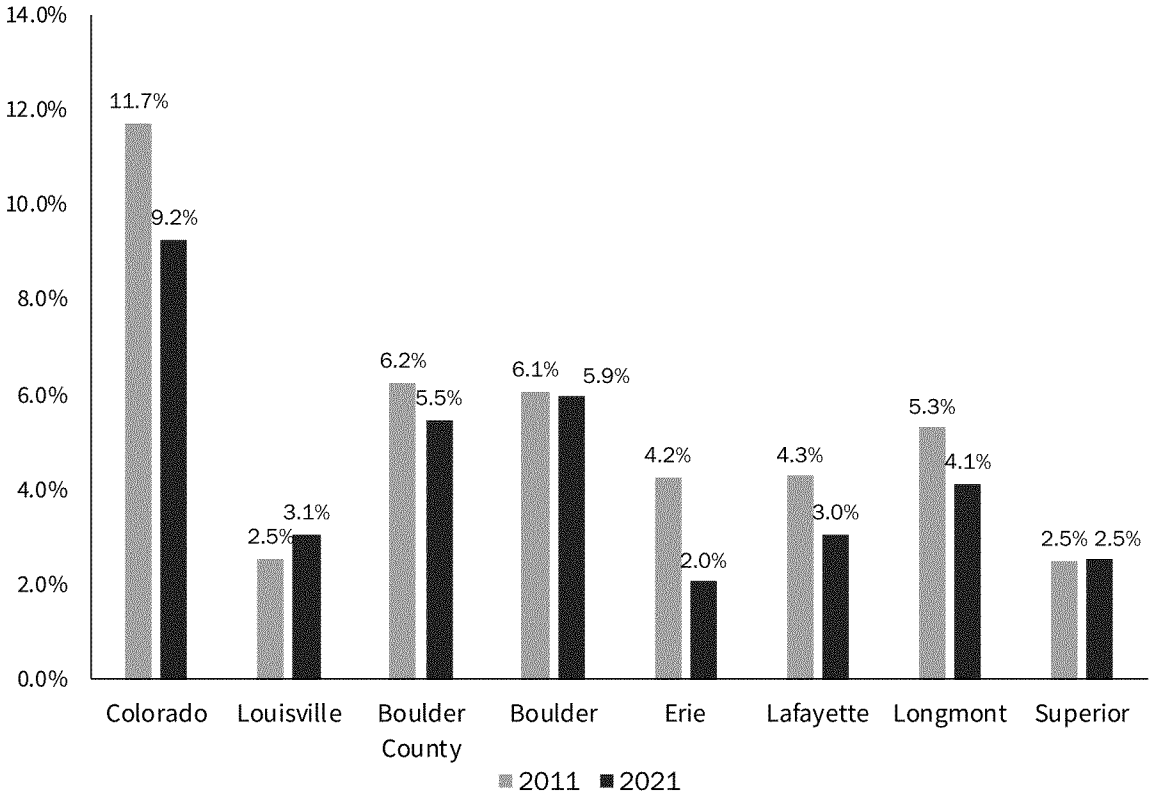
4.2.4 Overall Housing Vacancy, 2011-2021

Vacancy is a measure of the availability of housing units in a given area. When there are more vacant units than there are people looking for a place to live, it can lead to lower rents and other housing costs. This can make housing more affordable for people who are looking for a place to live. On the other hand, when there is a low vacancy rate and high demand for housing, it can lead to higher rents and other housing costs. This can make housing less affordable for people who are looking for a place to live.

Therefore, vacancy rates can have a significant impact on housing affordability in an area. The exhibit below shows vacancy rates for Superior and comparison cities between 2011 and 2021. Superior has one of the lowest overall vacancy rates, at 2.5 percent. Trends in Boulder County show that vacancy rates have mostly declined, suggesting that it is more difficult for households to find an affordable place to live.

Exhibit 24. Housing Vacancy Rate, Superior and Comparison Cities, 2011-2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



4.2.5 Vacant Units by Reason, Superior and Boulder County, 2021

Housing units can be recorded as vacant in the American Community Survey for a variety of reasons. Some vacancies are short term, such as when a unit is listed for rent or sale but not currently occupied. Seasonal (or vacation) homes represent another type of vacancy because they are not occupied year-round.

As shown in the exhibit below, most of the vacant units in Superior are currently listed for rent or are rented but tenants have not yet moved in. A smaller share of vacant units, at 16 percent, are vacation homes or part-time residences. Superior's share of vacation homes is slightly lower than Boulder County, where 20 percent of vacancies are due to seasonal use.

Seasonal, recreational, and occasional-use units collectively refer to housing units that are not consistently occupied by residents but are utilized for specific seasons, occasional purposes, or temporary stays by individuals with their usual place of residence elsewhere.

Exhibit 25. Vacant Units by Reason, Superior and Boulder County, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

	Superior		Boulder County	
Vacancy Reason	Count	Precent	Count	Percent
For rent	44	36%	843	31%
Rented, not occupied	45	37%	538	20%
For sale only	14	11%	219	8%
Sold, not occupied	0	0%	38	1%
For seasonal, recreational, or occasional use	19	16%	540	20%
For migrant workers	0	0%	0	0%
Other vacant	0	0%	516	19%
Total:	122		2,694	

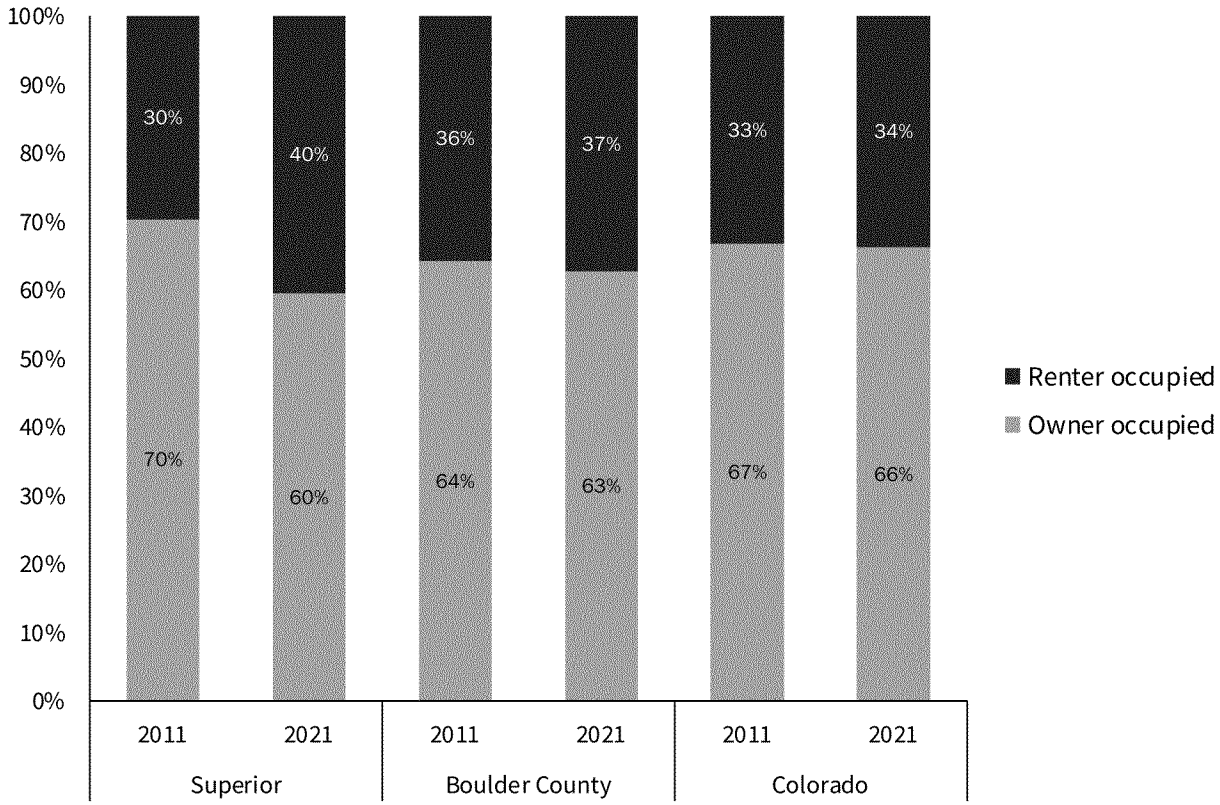
4.2.6 Housing Tenure (Owner vs Renter)

Household tenure is an important component of housing needs, as it helps to determine whether future housing should be built as ownership units or rental units. In many areas, a notable portion of households choose to rent their homes, emphasizing the significance of having rental housing that is both of good quality and reasonably priced.

Most of Superior's housing units are occupied by owners, but the share of owned homes has declined in the past 10 years. The current share of owner-occupied homes in Superior (60 percent) is similar to the share in Boulder County (63 percent). As of 2021, 40 percent of households in Superior were renters, higher than the renter percentage in Colorado (34 percent) and Boulder County (37 percent). The share of Superior households who rent increased from 30 percent in 2011 to 40 percent in 2021.

Exhibit 26. Housing Tenure, Superior and Boulder County, 2011-2021

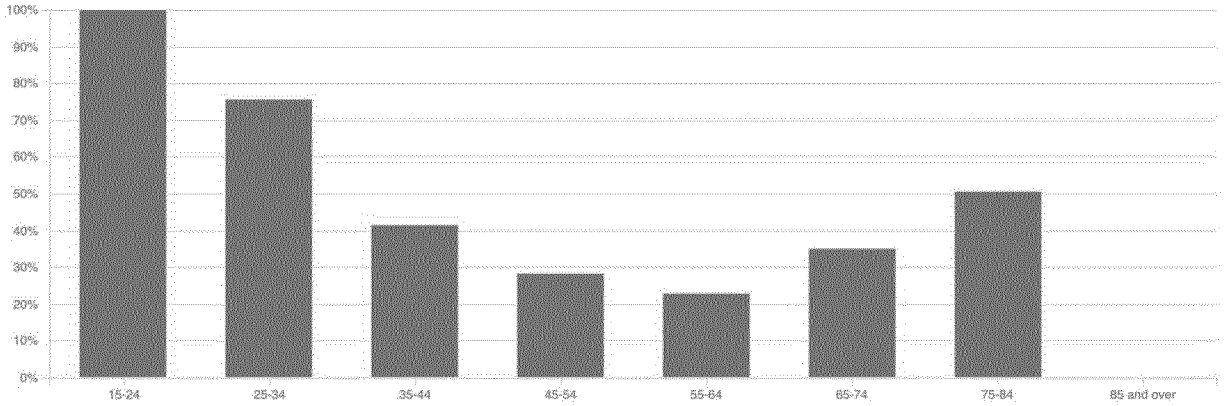
Source: American Community Survey (ACS) 2011 and 2021 5-year estimates



The share of households who rent varies substantially by age; therefore, renters of different ages and household sizes may be interested in different forms and sizes of rental homes. In Superior, as of 2021, households headed by an individual aged 15 to 34 were the most likely to rent. While households headed by an individual aged 55 to 64 were the least likely to rent.

Exhibit 27. Share of Renter by Age, 2021

Source: American Community Survey (ACS) 2021 5-year estimates



4.3 Apartment Rental Market

The exhibit below shows a snapshot of Superior and Boulder County's apartment rental market. As of 2023 Q2, Superior had approximately 1,210 apartment rental units in one multibuilding complex. Boulder County had 28,406 apartment units in 708 buildings. Additionally, there are 504 apartment units in the pipeline or under construction in Superior, with an additional 1,753 units under construction elsewhere in Boulder County. The average rent per unit in Superior is $2,406 or $2.38 per square foot, which exceeds the County average rent per unit of $1,917 or $2.25 per square foot.

Exhibit 28. Superior and Boulder County Apartment Rental Market Snapshot, 2023

Source: CoStar

	Inventory (buildings)	Units	Inventory Avg. SF	Under Construction	Avg. Rent per SF	Avg. Rent per Unit	Vacancy Rate
Superior	1*	1,209	1,028	504	$2.37	$2,392	7.7%
Boulder County	708	28,406	847	2,257	$2.24	$1,906	5.7%

* This project is a large multibuilding complex owned by a single entity.

According to CoStar, the apartment rental market in Superior was relatively stable with an overall vacancy rate of 7.7 percent as of 2023 Q2, as shown in exhibit 29. By comparison, Boulder County had a tighter housing market, with a vacancy rate of 5.7 percent. Since 2013,

Superior's apartment market has seen growth of 74 percent ($1.01 per square foot), which has outpaced Boulder County's rent growth of 52 percent ($0.77 per square foot).

Exhibit 29. Apartment Rent per Square Foot and Vacancy Rate, Superior and Boulder County, 2013–2023 Q2

Source: CoStar

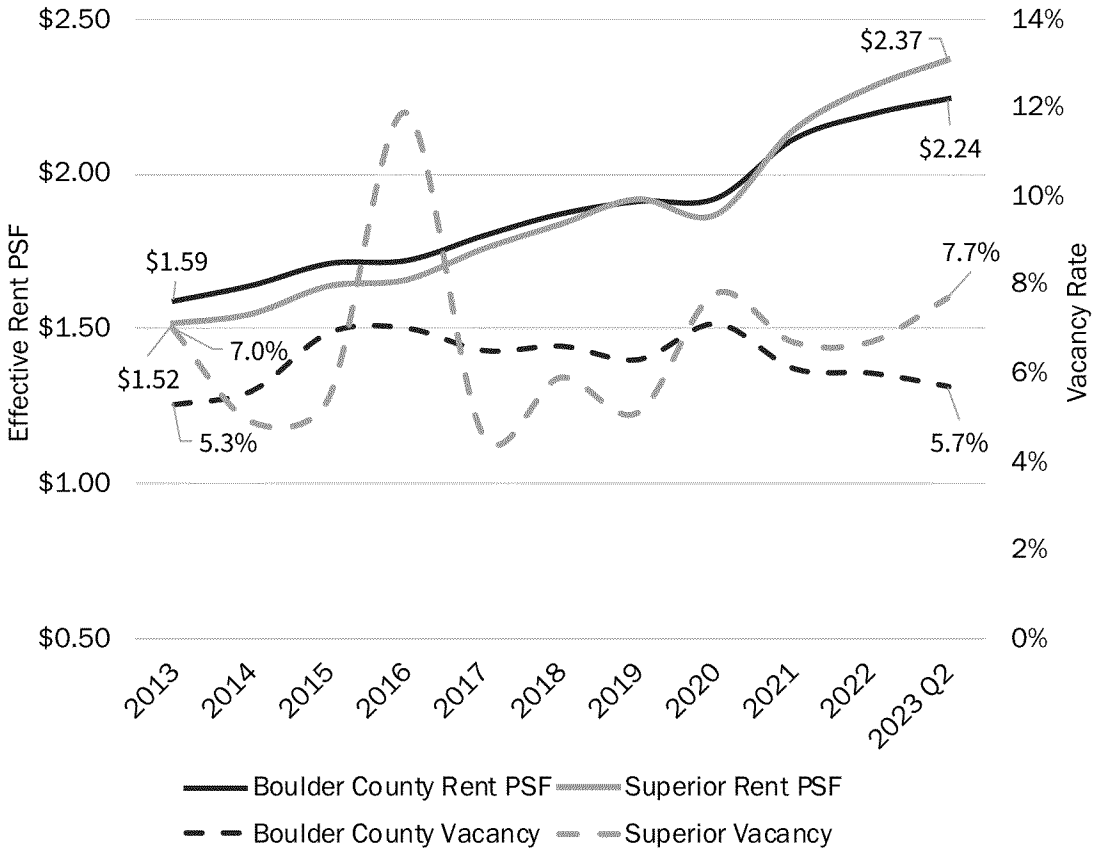


Exhibit 30 shows apartment deliveries and net absorption in Superior. Apartment deliveries refer to the new units built in the market, while net absorption refers to the difference between the number of units leased and the number of units vacated during a specific period. Since 2013, there have been no new multifamily apartment units completed in Superior's market.

Exhibit 31 shows apartment deliveries and net absorption in Boulder County overall. Since 2013, Boulder County has seen a delivery of 8,365 units and a net absorption of 7,779 units. New units delivered seem to be absorbed (leased up) by the market quickly, indicating a strong demand for apartments in the County.

Exhibit 30. Apartment Deliveries and Net Absorption, Superior, 2013-2023 Q2

Source: CoStar

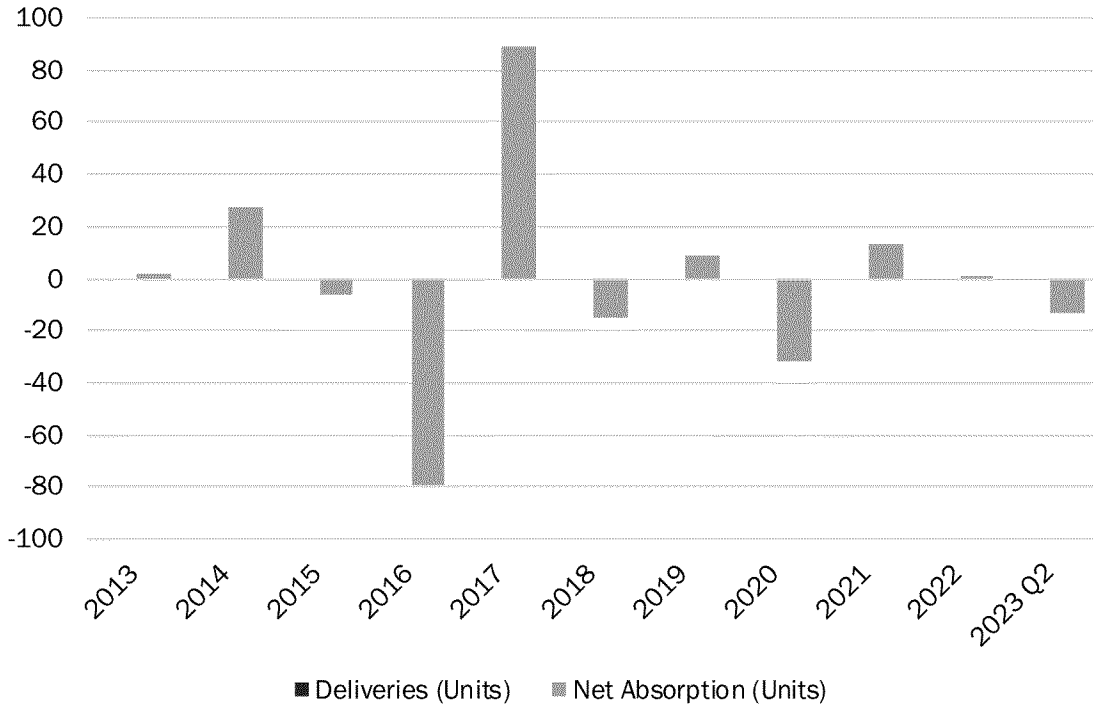
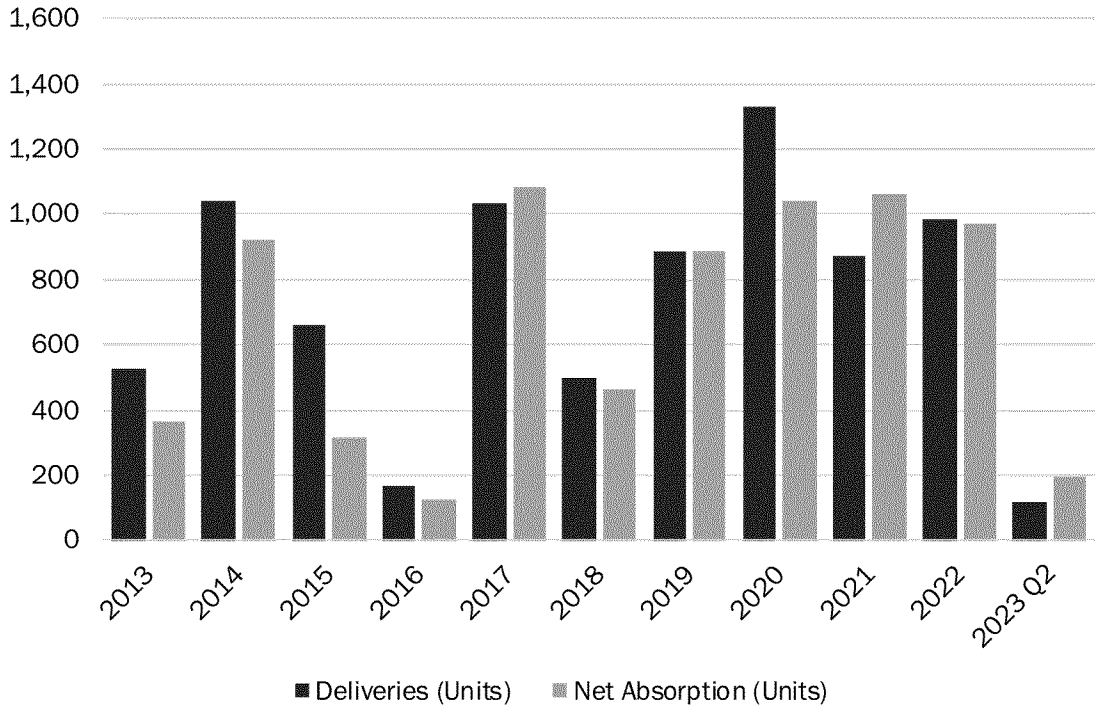


Exhibit 31. Apartment Deliveries and Net Absorption, Boulder County, 2013-2023 Q2

Source: CoStar



4.4 Housing Production

A community's housing stock is defined as the collection of all housing units located within the jurisdiction. The production of houses, including types of housing built as well as the incorporation of subsidized affordable housing, is an important factor in addressing the housing need of the community. This section details the housing stock characteristics of Superior to identify how well the current housing stock meets the needs of the current and future residents of the Town.

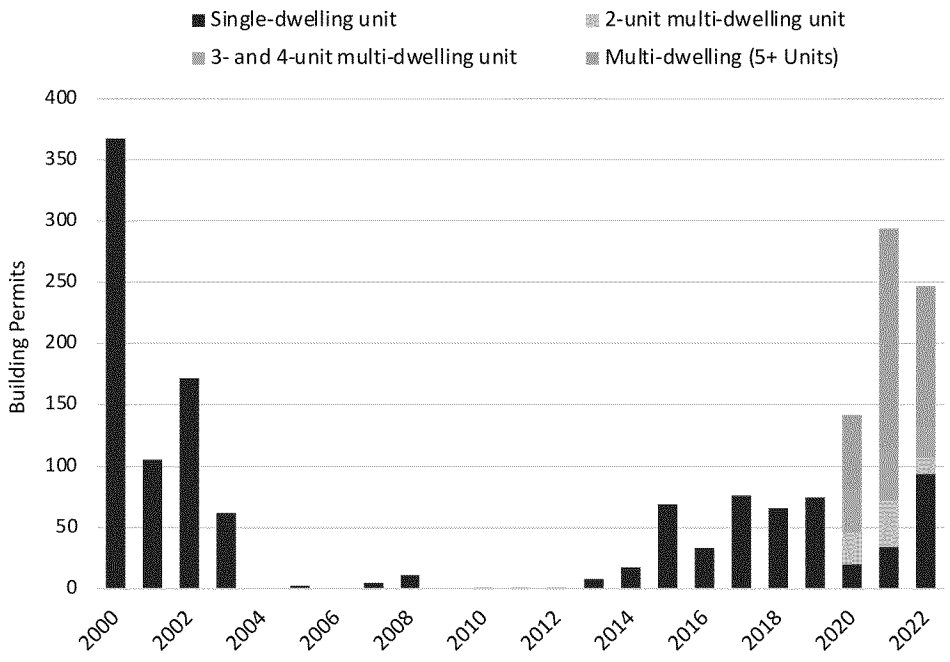
4.4.1 Building Permits

Exhibit 32 shows trends in residential building permits. For the past 20 years, single-dwelling units have been the dominant type of housing permitted in Superior, but as of 2020, permits for small duplex, triplex, fourplex, and apartment units outpaced single dwellings.

Development trends show that Superior's housing market experienced decline before the 2008 Great Recession and was slow to recover. Residential permitting has grown rapidly since 2020, driven by the development of Downtown Superior. Despite this increase, the pace of permitting has not reached the level seen in 2000 when 367 permits were approved.

Exhibit 32. Building Permits in Superior, 2000-2022

Source: HUD SOCDS Building Permits Database



The following table outlines the number and type of housing units added to the Town of Superior following the 2021 ACS total. The table includes units that are complete, under construction, or able to pull a building permit.

Development	# of Units	Unit Type
Lanterns Lane	62	Duplex
Rogers Farm (Wee Cottages)	55	Small Lot Single-Family
Superior Shores	94	Townhomes
Downtown	972*	Mix of Single-Family, Townhomes, Apartments
Total	1,183	

**1,052 approved to date, assumed 80 units complete within pre-2021 totals*

4.5 Unregulated and Subsidized Affordable Housing

An important component of any community's housing inventory is the stock of housing that is affordable to households earning lower incomes. This housing can be regulated or unregulated and is most often rental housing.

Unregulated affordable housing is affordable to lower-income households by virtue of its location, age, condition, or amenities. Typically, unregulated affordable housing units are older, smaller, and/or lower quality with fewer amenities, older appliances, or older appearances. These properties often have some deferred maintenance or capital needs. Because there is not enough regulated affordable housing across the country, unregulated housing is an important part of the housing stock in a community. But because it is unregulated, the rents charged at the properties can change suddenly and can be influenced by the larger real estate market. In addition, these properties can sometimes have habitability issues if they are not well maintained by the landlord.

Regulated affordable housing often has public funding that restricts the maximum incomes of the tenants or restricts the rents that can be charged to ensure that the housing is serving low-income households. This housing is sometimes referred to as government-assisted housing, referencing the public funds at the property. These restrictions vary by the type of funding and the affordability level at the property and typically have a limited duration that the property is affordable for a specified period. Generally, there are two types of housing programs in the United States that provide regulated affordable housing to cities: the Low-

Income Housing Tax Credit (LIHTC) program and Section 8 vouchers. These programs provide much-needed affordable housing to low-income residents. In the following sections, we summarize the inventory of regulated affordable housing units in Superior.

4.5.1 Low-Income Housing Tax Credit (LIHTC)

According to HUD's LIHTC database, Superior does not have any LIHTC housing. In the next section we discuss the other subsidized program available in Superior.

4.5.2 Section 8 Vouchers

According to Boulder County Housing Authority, 7 households in Superior received voucher assistance to help cover their rental housing costs.

4.6 Housing Cost

Housing cost has a direct relationship to housing accessibility for all economic segments of the community. In general, if housing supply exceeds housing demand, housing prices will decrease. If housing demand exceeds housing supply, housing prices typically increase. The availability of housing—which is measured by vacancy rates—can also affect housing cost.

Between 2012 and 2023, housing prices have significantly increased in Superior and across the region. Exhibit 33 below shows the median home sale price in Superior and a few comparison cities. The median home sale price in Superior increased from $359,000 in 2012 to $724,000 in Q1 2023, roughly a 100% increase. Since 2012, Superior's housing market increased at a similar rate in relation to the other comparison cities. The Marshall Fire of 2021, in its most recent impact, led to a surge in housing demand, subsequently causing an uptick in median home sale prices. However, Downtown Superior, having erected approximately 1,000 residential units after the fire, has mitigated the heightened housing demand, resulting in a modest decrease in prices.

Exhibit 33. Median Home Sale Price, Superior and Comparison Cities, 2012-2023

Source: Redfin

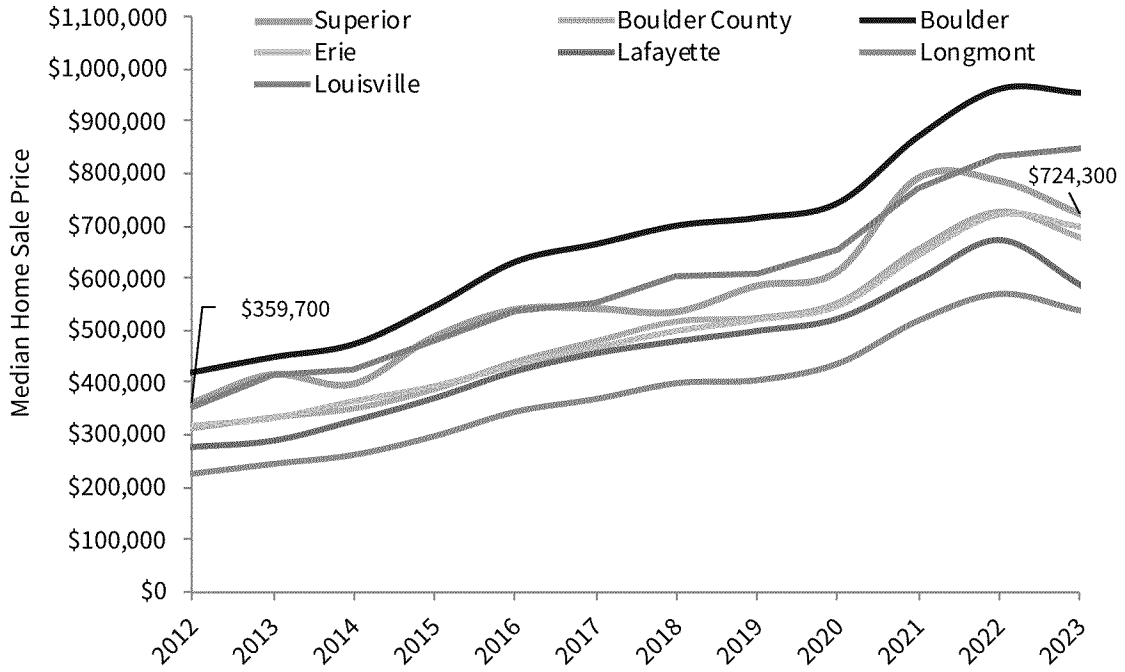


Exhibit 34 shows that the median sale price of a home has increased in all comparison cities since 2012, with the most significant increase in Louisville (139 percent), followed by Longmont (137 percent) and Boulder (127 percent). Compared to the comparison cities, Superior's housing market experienced the lowest change at 101 percent (or $364,600).

Exhibit 34. Change in Median Home Sale Price, Superior and Comparison Cities, 2012-2023

Source: Redfin
Note: Median home sale price information on Redfin was only available from 2012 onward.

Jurisdiction	2012	2023	Change (2012-2023)	
			Number	Percent
Superior	$359,700	$724,300	$364,600	101%
Louisville	$355,725	$850,000	$494,275	139%
Longmont	$228,025	$540,000	$311,975	137%
Lafayette	$276,200	$586,250	$310,050	112%
Erie	$318,175	$698,495	$380,320	120%
Boulder	$421,125	$955,000	$533,875	127%
Boulder County	$311,750	$680,000	$368,250	118%

Between 2011 and 2021, the median rent increased by 69 percent while the median household income increased by 32 percent. During this same period, the median home sale prices increased 353 percent. These trends suggest that incomes have not kept pace with the rising rents and home sale prices in Superior.

Exhibit 35. Change in Housing Costs and Median Household Income, Superior, 2011-2021

Source: American Community Survey (ACS) 2011 and 2021 5-year estimates, Redfin, ECONorthwest Calculations

	2011	2021	2011-2021 Change	
			Number	Percent
Median Rent	$1,283	$2,162	$879	69%
Median Home Sale Price	$175,000	$792,000	$617,000	353%
Median Household Income (unadjusted for inflation)	$100,194	$131,757	$31,563	32%

5. Housing Attainability

5.1 Cost Burden

State and federal standards specify that households spending more than 30% of gross annual income on housing experience a housing cost burden. Housing cost burden can occur when housing costs increase faster than household income. When a household spends more than 30% of its income on housing costs, households have less disposable income for other necessities, including health care, food, and clothing. In the event of unexpected circumstances such as the loss of employment or serious health problems, lower-income households with a burdensome housing cost are more likely to become homeless or be forced to double up with other households. Homeowners with a housing cost burden have the option of selling their homes and becoming renters. Renters, on the other hand, are more vulnerable and subject to constant changes in the housing market.

Exhibit 36 below shows housing cost burden for owner and renter households. In 2021, Superior renter households tended to be more cost burdened and severely cost burdened than owner households. About 26 percent of Superior renter households were cost burdened, while 14 percent were severely cost burdened. Housing affordability conditions for renter households in the County were more severe when compared to Superior. In Boulder County, 25 percent of renter households were cost burdened while 32 percent were severely cost burdened. In Boulder County specifically, several renter households had challenges with housing affordability and several were paying more than half of their annual income on housing costs.

Exhibit 36. Cost Burden by Tenure, Superior and Boulder County, 2021

Source: American Community Survey (ACS) 2021 5-year estimates

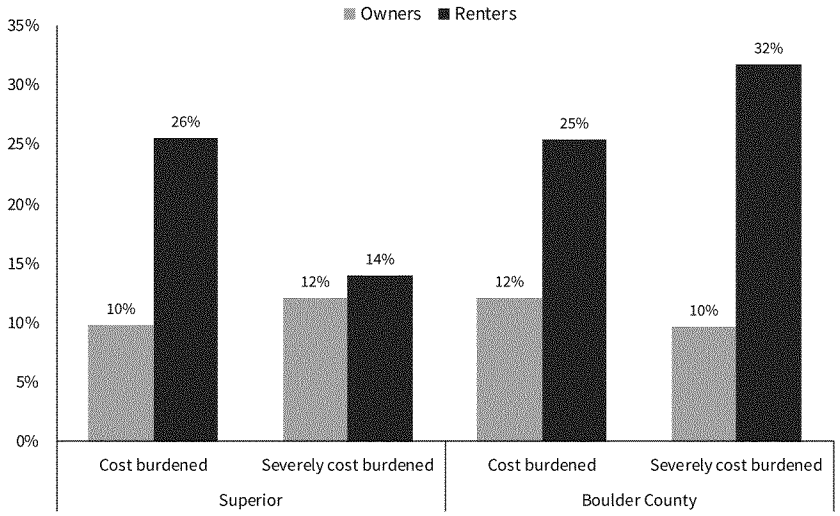
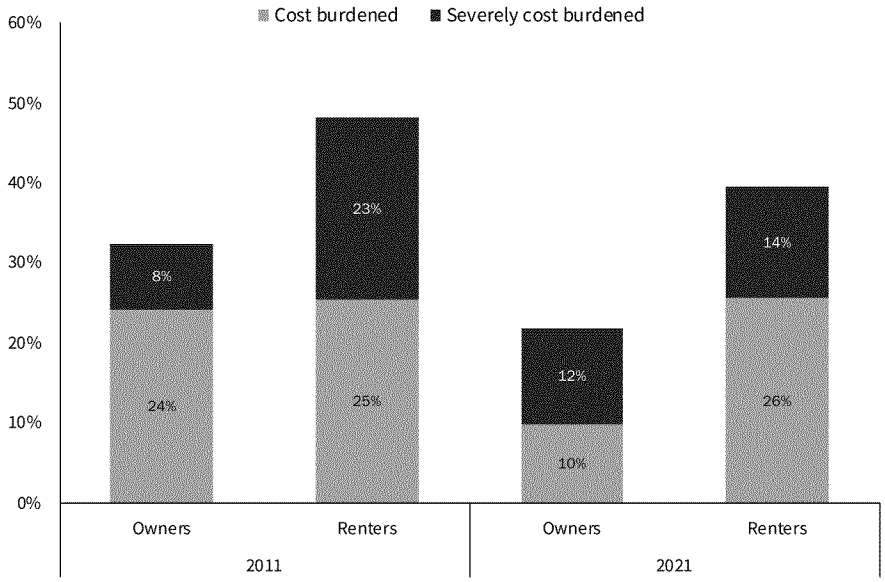


Exhibit 37 below shows how cost burden has changed over time in Superior. Generally, in 2021, fewer households in Superior were cost burdened compared to 2011. However, renter households remained the most susceptible to changing market conditions and were the most cost burdened in 2021. The fact that housing costs have outpaced household income growth can suggest increasing income inequality within Superior. Households with higher incomes may be able to cope better with rising housing costs, while those with lower incomes are more severely affected, potentially leading to an unequal access to housing that is affordable to them.

Exhibit 37. Change in Cost Burden by Tenure, Superior, 2011 and 2021

Source: American Community Survey (ACS) 2021 5-year estimates



5.2 Housing Attainability

Exhibit 38 shows the average rent and median home sale price in Superior in Q1 2023. With an average rent of $2,416 (for all homes and apartments), a household would have to make $96,940 or more to afford the average rent in Superior without being cost burdened. In comparison, with a median home sale price of $724,300, a household would have to make $181,000 or more to comfortably afford the median home price in Superior.

Exhibit 38. Average Rent and Median Sale Price in Superior and Related Affordability, Q1 2023

Source: Redfin, Zillow, ECONorthwest Calculations

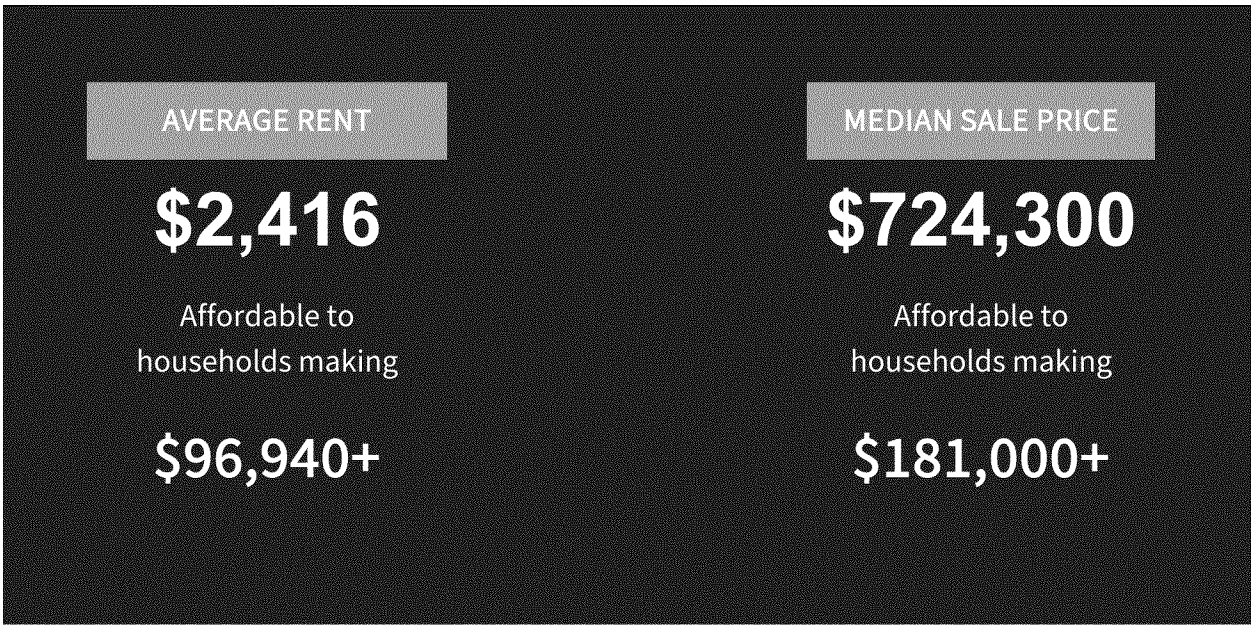


Exhibit 39 below illustrates housing affordability and the attainable monthly rent and home sale price based on household income. The median income for a family of four in Boulder County in 2023 is $144,100 (100% of area median income); this figure is based on HUD's calculation for Boulder County.

The estimates presented in Exhibit 39 are based on income and affordability ratios that lending banks typically use. They do not consider other household financial characteristics that can affect ability to pay for housing—other debt such as auto loans and credit cards as well as accumulated assets. A key challenge many lower-income households face is competition for affordable housing from higher-income households. It is rational for higher-income households to choose less-expensive housing if it is available and meets household needs.[2] Given entry costs (down payment for owner units, advance rent, and deposits for rental units) and required credit reports, lower-income households have clear disadvantages in competing for lower-cost housing.

Based on the information above about the average rent and median home prices in Superior, a household earning 100 percent of the area median income (AMI) in 2023 could not afford to purchase the median-priced home in Superior. However, this household could afford the

[2] https://www.strongtowns.org/journal/2021/4/27/are-new-homes-mostly-luxury-does-it-matter-if-they-are

average rent in Superior. This highlights four key takeaways playing out in Superior's dynamic housing market:

- **Superior has an income disparity.** While a household earning 100 percent of the area median income can afford the average rent, they cannot afford to purchase a home at the median price. This suggests that higher-income households likely have a better chance of homeownership, while lower- and median-income households might be limited to renting.
- **Potential barriers to homeownership exist.** The inability of a moderate-income household to afford the median-priced home raises questions about the potential barriers to homeownership in Superior. Factors such as high down payment requirements, stricter mortgage lending criteria, and rising home prices relative to income growth can make it difficult for many households to enter the homeownership market.
- **Increasing the supply of both renter and ownership product units is important** for Superior in the long term. If the demand for housing, particularly for homeownership, exceeds the available supply, it can drive up home prices and make it challenging for households with moderate incomes to purchase a home. Similarly, if the demand for rental housing exceeds the available supply, it can drive up rent prices and price out households that rent in Superior.

Exhibit 39. Housing Affordability in Boulder County for a Family of Four, 2023

Source: HUD, ECONorthwest Calculations

If your household earns:				
$43,200	**$86,500**	**$115,300**	**$144,100**	**$172,900**
30% of AMI	*60% of AMI*	*80% of AMI*	*100% of AMI*	*120% of AMI*
Then they can afford:				
$1,080 **Monthly Rent** **OR**	$2,160 **Monthly Rent** **OR** $260,000-$303,000 **Home Sale Price**	$2,880 **Monthly Rent** **OR** $404,000-$461,000 **Home Sale Price**	$3,600 **Monthly Rent** **OR** $504,000-$576,000 **Home Sale Price**	$4,320 **Monthly Rent** **OR** $605,000-$692,000 **Home Sale Price**
Related Occupation:				
Construction Worker	**Web Developer**	**Chemical Engineer**	**Data Scientist**	**HR Manager**
$43,290/ $20.81 hr	*$86,120/ $41.41 hr*	*$116,580/ $56.60 hr*	*$141,740/ $68.14 hr*	*$175,350/ $84.31 hr*

5.3 Worker Affordability

The exhibit below shows the average wages by industry in Boulder County and the maximum rent and median home price that workers in each industry could afford.

Only a select few industries in Boulder County have high enough wages that can afford the average rent of $2,416 in Superior. No industry has a high enough wage for a single earner to afford the median home price of $724,300 in Superior. Superior's employment is concentrated in the service sector and education industry. Based on the average wages earned in Boulder County in 2021, select workers in the services sector can afford the average rent but not the median-priced home. Workers in the education industry would typically not be able to afford the average rent or median-priced home in Superior.

A select number of industry professionals can afford the median-priced home in Superior, but only if they earn 1.5 times the industry wage per household. These jobs mostly fall under the services sector and those in utilities and wholesale trade.

Exhibit 40. Housing Affordability in Boulder County by Industry and Wages, 2021

Source: BLS, ECONorthwest Calculations

Industry	Annual Average Wage	Max Affordable Rent	Can Afford the Average Rent	Max Affordable Home Price	Can Afford Median Home Price in Superior	Can Afford Median Home Price with 1.5 Earners per household?
Agriculture, forestry, fishing, and hunting	$48,344	$1,209	No	$181,426	No	No
Mining, quarrying, and oil and gas extraction	$92,097	$2,302	No	$345,623	No	No
Utilities	$122,413	$3,060	Yes	$459,393	No	Yes
Construction	$67,538	$1,688	No	$253,457	No	No
Manufacturing	$96,587	$2,415	No	$362,473	No	No
Wholesale trade	$127,856	$3,196	Yes	$479,819	No	Yes
Retail trade	$40,551	$1,014	No	$152,180	No	No
Transportation and warehousing	$51,346	$1,284	No	$192,692	No	No
Information	$177,255	$4,431	Yes	$665,205	No	Yes
Finance and insurance	$143,372	$3,584	Yes	$538,048	No	Yes
Real estate and rental and leasing	$69,937	$1,748	No	$262,460	No	No
Professional, scientific, and technical services	$135,799	$3,395	Yes	$509,628	No	Yes
Management of companies and enterprises	$151,476	$3,787	Yes	$568,461	No	Yes
Administrative and support and waste management and remediation services	$51,675	$1,292	No	$193,927	No	No
Educational services	$48,225	$1,206	No	$180,979	No	No
Health care and social assistance	$61,078	$1,527	No	$229,214	No	No

Arts, entertainment, and recreation	$32,796	$820	No	$123,077	No	No
Accommodation and food services	$27,305	$683	No	$102,471	No	No
Other services (except public administration)	$49,621	$1,241	No	$186,218	No	No

5.4 Housing Affordability and Transportation Costs

Traditional measures of housing affordability ignore transportation costs, although transportation typically represents a household's second-largest expenditure. These costs are heavily influenced by the location of where a household lives relative to their place of work. When people live farther from job centers and places of work, less reliable alternatives exist, so households typically need to own a vehicle to make their daily trips.

In Superior, 2,462 people commute into the town for work, while 5,846 people commute out of Superior for work. The majority of Superior residents (66 percent) commute alone by car, 9 percent carpool, 3 percent use public transit, and 22 percent work from home. These commuting characteristics and auto dependency indicate that transportation costs may impact Superior households' ability to pay for housing and other household essentials.

According to the Center for Neighborhood Technology, which analyzes housing and transportation costs, an average Superior household spends 51 percent of their annual income on housing and transportation costs (33 percent for housing and 18 percent for transportation). A typical Superior household spends $14,584 annually on transportation costs and owns 1.88 vehicles per household. According to the Center for Neighborhood Technology, transportation costs are considered affordable if they are 15 percent or less of household income, or $12,453 per year. This suggests that Superior residents typically spend more on transportation costs than the average US household.

5.5 Homelessness

Data from the Metro Denver Homeless Initiative (MDHI) shows increases in homelessness in Boulder County. In 2023, MDHI counted 839 unhoused people living in Boulder County, a notable increase from previous counts and confirmation that homelessness is rising across Boulder County and the Denver metro region. Of the 839 people experiencing homelessness, 596 people were in emergency shelters, transitional housing, or safe haven programs. The other 243 people counted were sleeping unsheltered on the streets or another place not meant for human habitation. The data represents a snapshot in time that can vary due to

several factors such as weather conditions, methodology, and the participation of volunteers conducting the tallies.

Although there is no specific data that shows the number of unhoused individuals living in Superior, providing shelter and homeless preventive programs and resources is important toward providing the gamut of the housing spectrum.

In addition, Superior does not have a shelter in the Town and all individuals or families experiencing homelessness would need to go through Boulder County's Coordinated Entry. The Coordinated Entry is the first stop and key element of the adult homeless service system, which all individuals need to go through to identify the help they need.

6. Marshall Fire Recovery

In December 2021, the Marshall Fire in Boulder County grew out of several small wildfires, developing into a single large wildfire spanning roughly 6,000 acres that destroyed homes and businesses in Superior and Louisville. The fire destroyed 394 properties in Superior. The majority were residential properties (390 in total), and four commercial properties were destroyed. Roughly 8 percent of Superior's housing stock was destroyed during the Marshall Fire—further limiting the number of housing units available in Superior.

Since the fire, the Town of Superior's top priority has been helping residents with their recovery process. The Town created a web page and dashboard tracking the recovery efforts. As of August 2023, 394 lots have been cleared while 236 building permits have been issued and 37 building permits are pending. About 76 residential families have been able to move back into their neighborhood and 2 commercial buildings have been reopened. To help families rebuild, the Town has offered building permit and plan fee rebates to help reduce the costs of rebuilding. In total, as of August 2023, the Town has issued more than $2.5 million in rebates to families wanting to rebuild.

In March 2023, Louisville and Superior sponsored a Marshall Fire Recovery Advisory Panel by the Urban Land Institute (ULI). This panel provided feedback and recommendations for rebuilding housing and climate resilience, including:

- **Affordable homeownership options:** The Panel found that new construction in Louisville and Superior is priced above what many households in the area could afford and was exacerbated by the loss of housing in the fire. Particularly for "workforce" households, first-time homebuyers, and seniors, many new homeownership products (especially single-family detached homes) are unattainable. The Panel found that

there are opportunities to develop more "missing middle housing" to offer more attainable homeownership opportunities, including developing deed-restricted housing, subdividing existing lots, and supporting the development of accessory dwelling units. In addition, the Panel recommended cities consider implementing developer incentives for missing middle housing, purchase sites for infill housing, and offer first-time homeowner financial assistance.

- **Limited rental opportunities:** The Panel found that the loss of housing further constrained an already limited rental stock in the area, leading to rental price gouging. Particularly for lower-income residents, there is inadequate attainable rental stock in the areas. To address renter housing needs, the Panel recommended that cities implement developer incentives for building rental housing, as well as a disaster-related rental housing voucher program for displaced renters.
- **Data availability:** The Panel found there is a lack of data on the socioeconomic characteristics of the displaced neighborhoods following the fire. The Panel recommended cities consult findings from the Marshall Fire Unified Survey Team to better understand the affected residents' needs and tailor rebuilding strategies accordingly.

Initial findings from the Marshall Fire Unified Survey Team revealed disparities in insurance coverage and rebuilding progress across income levels. The survey team found that underinsurance was a significant obstacle for many affected households, with only a small percentage of respondents' expecting insurance coverage to fully meet their rebuilding costs. The extent of expected insurance coverage correlated with income levels, with higher-income households anticipating higher payouts. This correlation was also reflected in the progress of rebuilding, as those expecting higher insurance coverage were more likely to have received building permits after one year compared to those with lower coverage expectations. This inequity can exacerbate existing inequalities during the rebuilding process, and the survey team recommends the City prioritize programs that offer rebuilding assistance to households with fewer resources.

7. Population Forecast

One way to to understand the forecast of future housing demand in Superior is to consider county-level population forecasts from the Department of Local Affairs (DOLA) State Demography Office. In the next 20 years, Boulder County's population is forecasted to grow by 51,869 people, at an annual growth rate of 0.73 percent. Based on historical population trends, Superior's population has made up approximately 4 percent of the county's

population. If this trend continues, Superior's population is expected to grow by 2,075 people in the next 20 years. The exhibit below shows 2043 population forecasts for Boulder County along with Superior's 4% share. Much of the forecasted growth for Superior is already captured within the units shown in Section 4.4

Exhibit 41. Population Forecast, Superior and Boulder County

Source: DOLA County 1-Year Population Forecast 2022
Note: *ECONorthwest estimates. Assumes 4.0% share of county population.

				Future Growth (10 Years)		Future Growth (20 Years)	
	2023	2033	2043	# Total	AAGR	# Total	AAGR
Boulder County	331,428	358,550	383,296	27,122	0.79%	51,869	0.73%
Superior*	13,257	14,342	15,332	1,085	0.79%	2,075	0.73%

Based on units in Section 4.4, the following table estimates the resulting population growth:

	Total Units	Total Population
2011	4,597	12,572
2021	4,790	13,053
Currently approved, under construction, or complete since 2021*	5,973	15,656**

*Units associated with the remainder of Downtown Superior, Roger's Farm Wee Cottages, Lanterns Lane, and Superior Shores. See Sec. 4.4.

**The Total Population as a result of these developments assumes an average household size of 2.2 persons per unit.

The work to develop this report included an evaluation of existing zoning and entitlements to understand the opportunity for additional housing units. The only area of Town where additional units are currently possible is within Original Superior. According to the NW Superior Area Study, roughly 100 additional housing units could be constructed on lots that were vacant prior to Marshall Fire. Additional units in Original Town could be built as

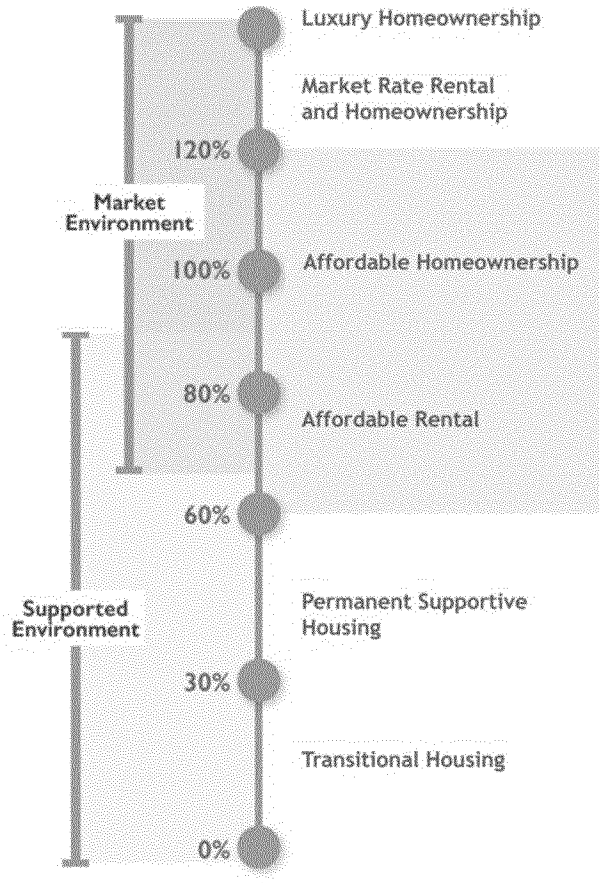
Accessory Dwelling Units. Any additional housing units would require change in land use codes, zoning, and Planned Development Amendments.

Despite the addition of the units described above, the Town will continue to experience demand for additional housing due to its proximity to Boulder and Denver and ongoing regional housing pressure brought on by population growth. Without changes to land use codes and policy, Superior would not be able to accommodate new units to meet the ongoing demand.

8. Future Housing Need

Community housing (also known as the housing continuum) encompasses a wide range of housing needs within an area, not only focused on affordable, or workforce, but all types of housing for people with a diversity of needs. While private, market-rate housing development is essential and desired in many areas, an intentional focus on supporting the development of housing that is attainable and accessible to a wide range of incomes, ages and social status is necessary to maintain a diverse, healthy, and prosperous community.

Exhibit 42. The Housing Continuum



A community with a harmonious housing continuum can effectively fulfill the diverse housing needs of numerous households, ensuring housing stability, particularly for those with lower incomes. It accommodates affordable housing options for the workforce while also offering market-rate and luxury housing for higher-earning households.

This report has identified current challenges for some households in Superior, and has identified trends which will influence housing needs in the future. Generally, there is an adequate amount of larger single-family homes to

meet Superior's needs in the next 20 years. Superior should focus on meeting the needs of targeted groups to provide a better balance of housing in the Town.

This assessment has identified housing needs for the following targeted population groups:

Aging Residents

- Superior's senior population is rapidly growing. This growth is unlikely to slow as Gen Xers grow older.
  - Seniors aged 65 years and older experienced the fastest growth since 2011, increasing by 246 percent.
  - Millennials and Gen Xers represent about 57 percent of Superior's population. As this population ages, Superior's senior population will continue to grow.
- Superior should consider multiple housing options to meet the changing needs of seniors. These could include services to allow "aging-in-place", single-story homes with universal design, rental properties that are targeted to seniors, allowances for multi-generational living including Accessory Dwelling Units throughout Town, and facilities that provide a continuum of care for seniors, including independent living, assisted living, and memory care.

Local low-wage workers, renters of all incomes, and first time homebuyers

- The Town's recently adopted Inclusionary Housing Ordinance does not apply to the properties currently developing new market rate housing.
- In Superior, homeownership rates have decreased 10 percent since 2010, while homeownership rates remained stable in Boulder County and Colorado.
- The share of households who rent increased by 10 percent between 2011 and 2021. This underscores the significance of having rental housing that is both of good quality and reasonably priced.
- The desire for homeownership by millennials and Gen Z will increase as they age. As a result, there will be a demand for starter homes and relatively affordable types of ownership and rental housing.
- Additionally, to accommodate the housing needs for this population group, there will need to be more one- and two-bedroom housing units and housing near major employment centers and services.

Housing Conditions & Needs Survey

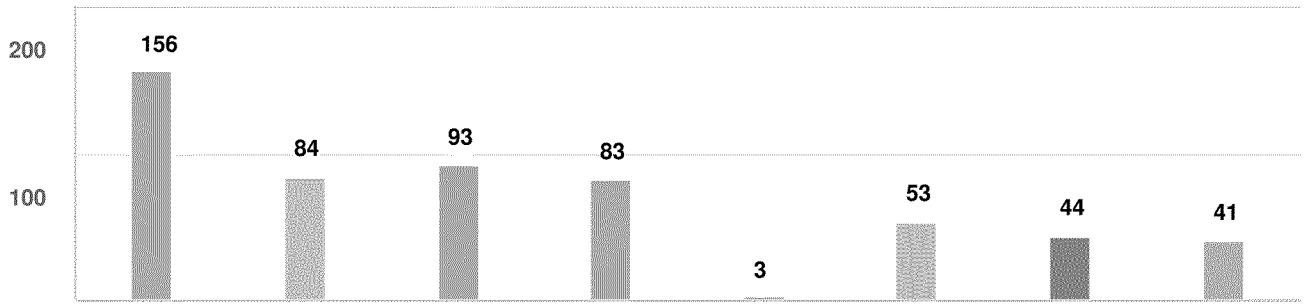
SURVEY RESPONSE REPORT
12 August 2019 - 01 July 2024

PROJECT NAME:
Housing Needs Assessment & Strategic Plan

BANG THE TABLE engagementHQ

SURVEY QUESTIONS

Q1 Which of the following housing challenges do you think are most pressing in Superior? (select 3)

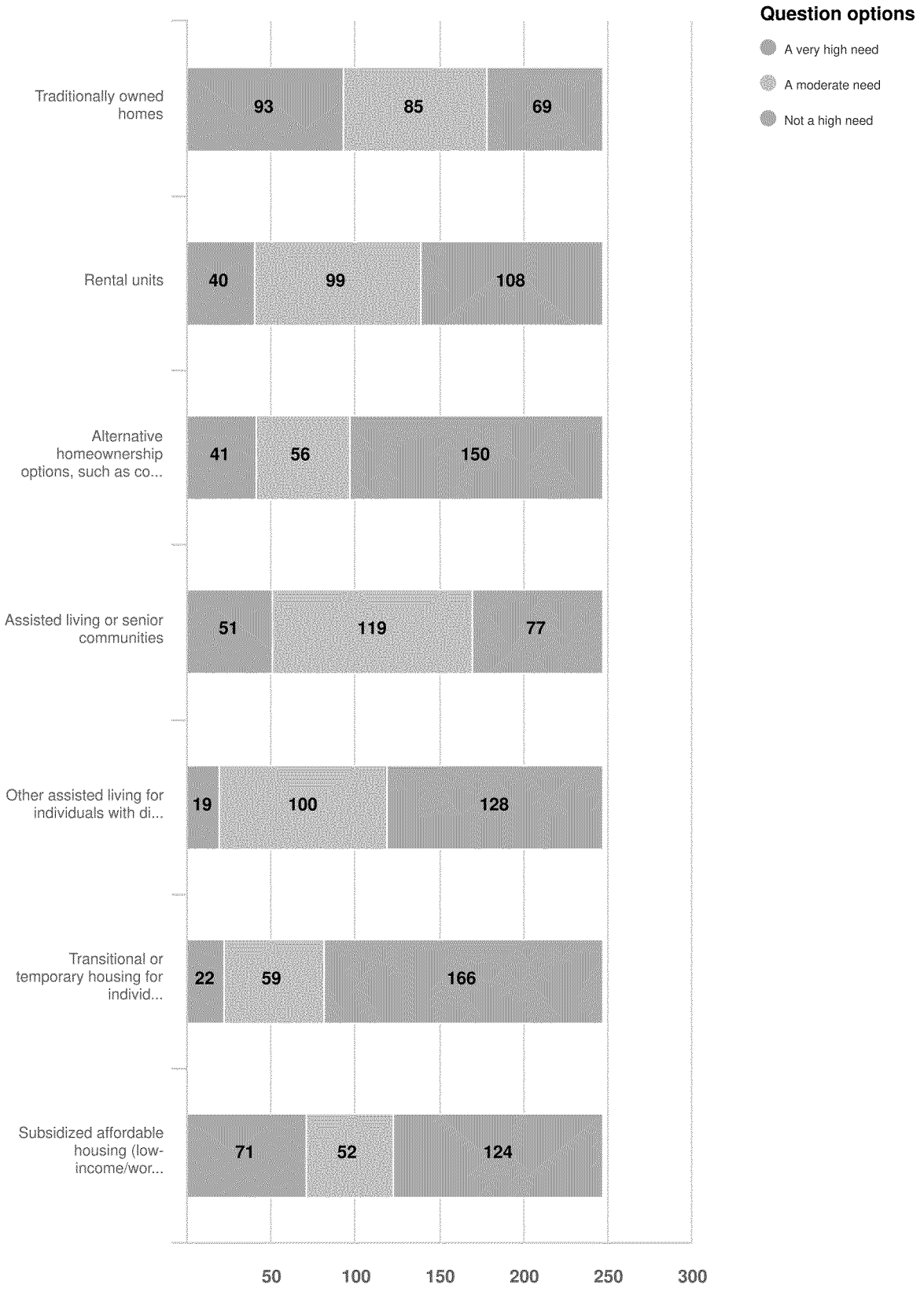


Question options

- Cost
- General availability of supply
- Availability of specific housing types (e.g. rental, ownership, single-family, duplex, townhome, 4-bedroom, 1-bedroom, ADA accessible, subsidized affordable, ADU, etc.)
- Maintenance and quality
- Homelessness
- Development and permitting process
- Proximity of available and/or affordable homes to daily needs (work, school, grocery, services, etc.)
- Transportation costs (time and/or money)

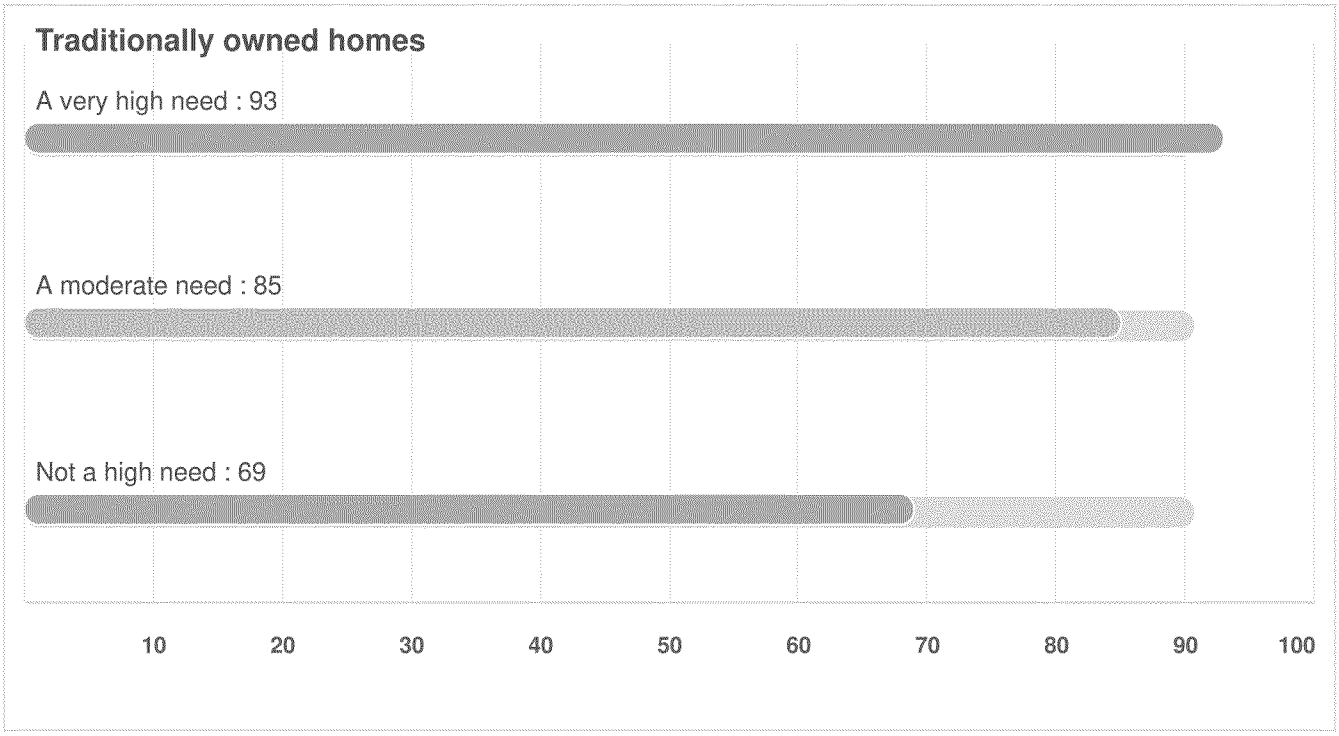
Mandatory Question (247 response(s))
Question type: Checkbox Question

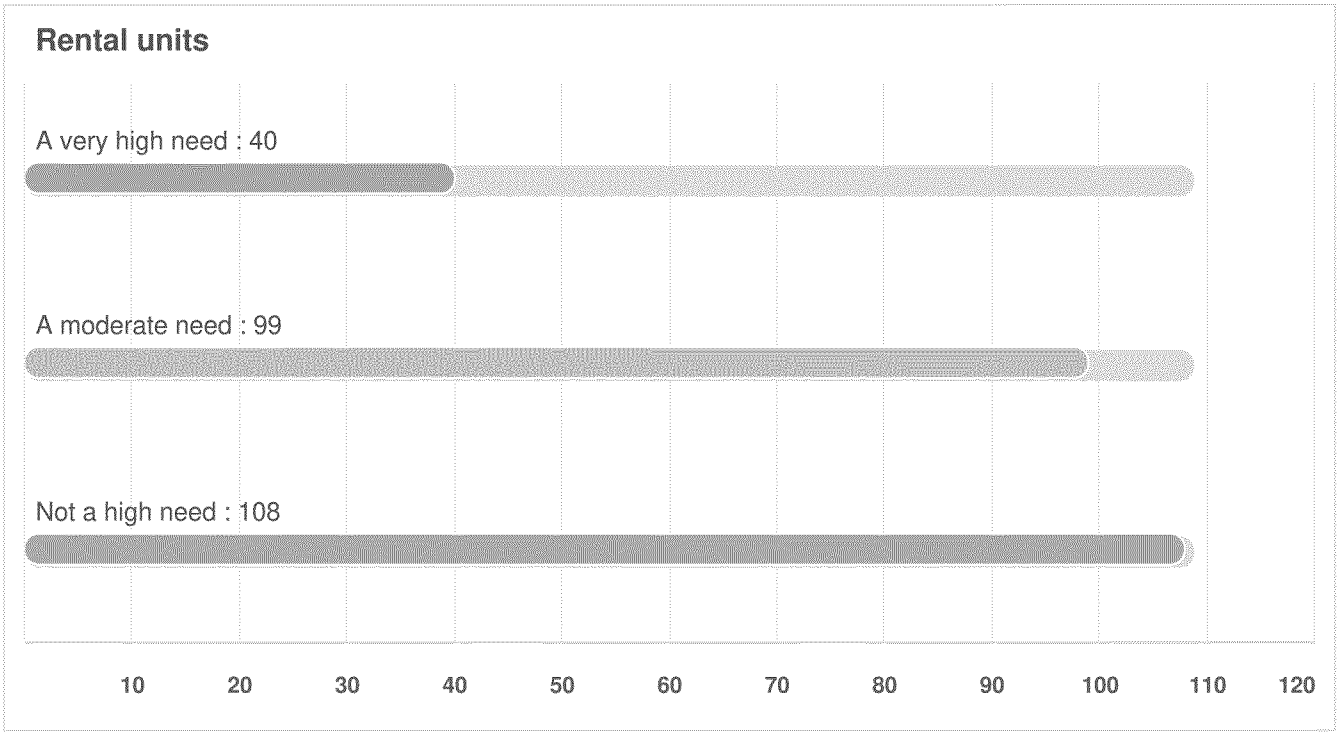
Q2 What types of housing ownership and management options do you think are most needed in the community? (indicate the level o...



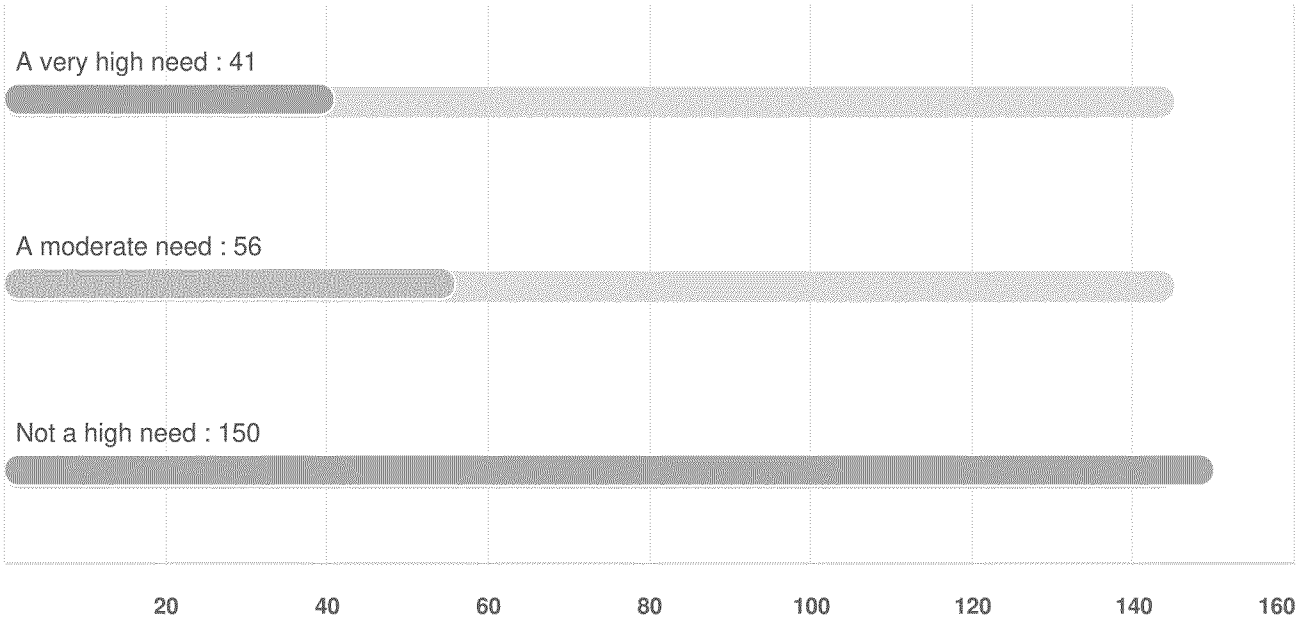
Mandatory Question (247 response(s))
Question type: Likert Question

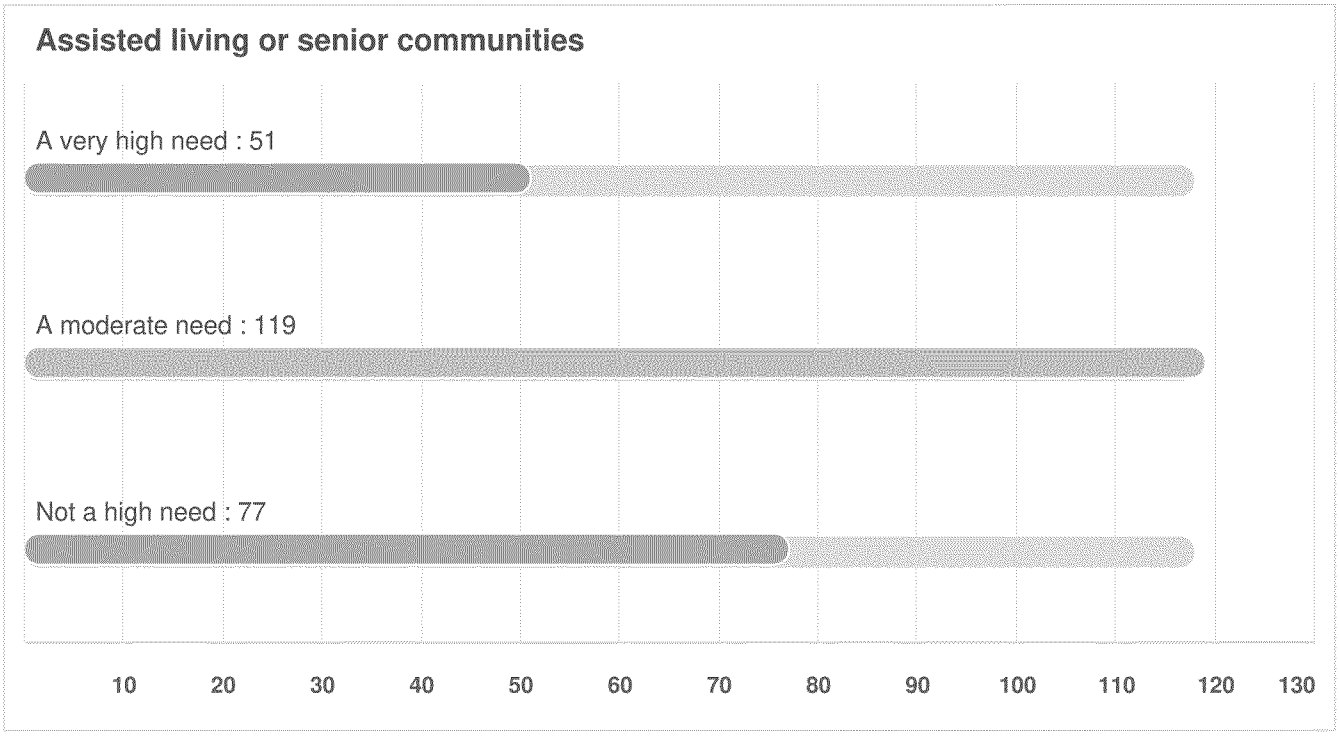
Q2 What types of housing ownership and management options do you think are most needed in the community? (indicate the level o...

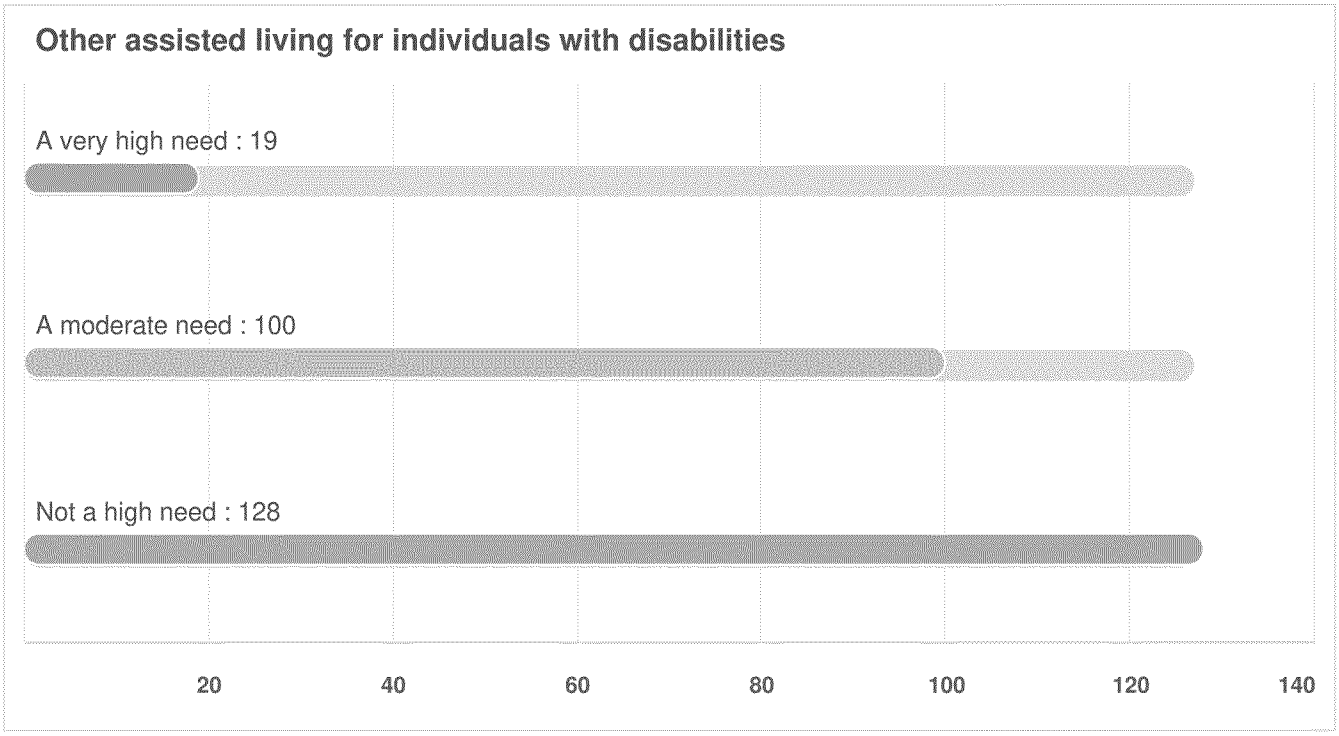



Rental units
A very high need : 40
A moderate need : 99
Not a high need : 108
10
20
30
40
50
60
70
80
90
100
110
120

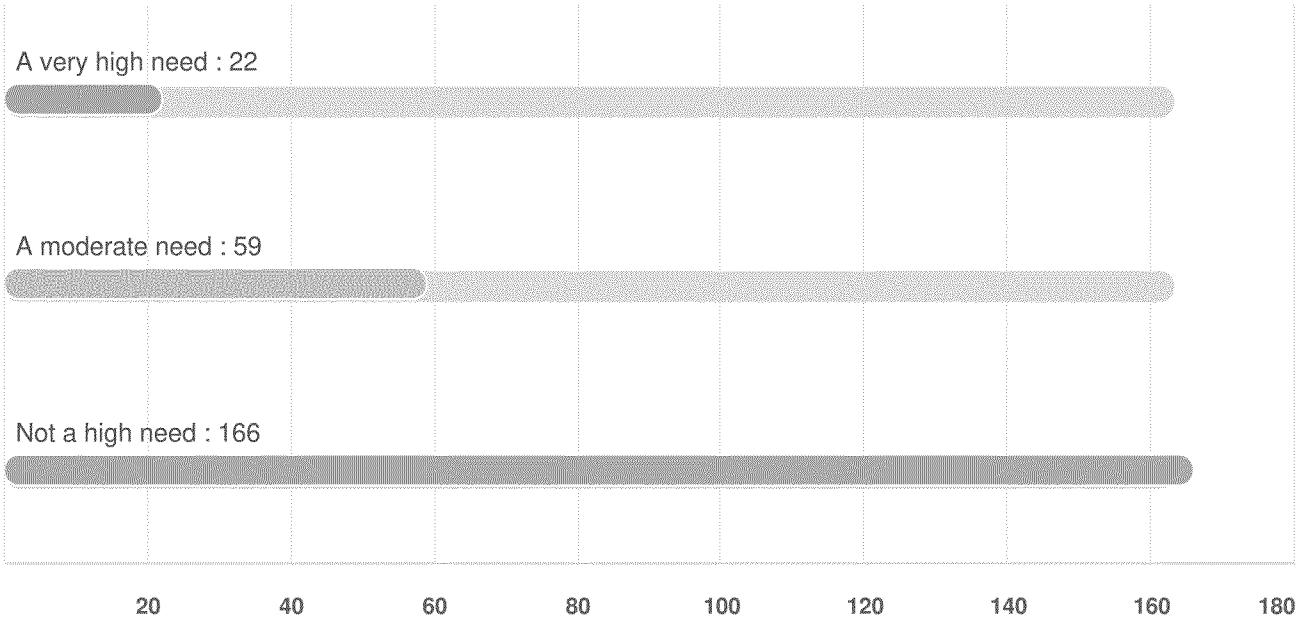
Alternative homeownership options, such as community land trusts and limited equity cooperatives (shared equity housing)

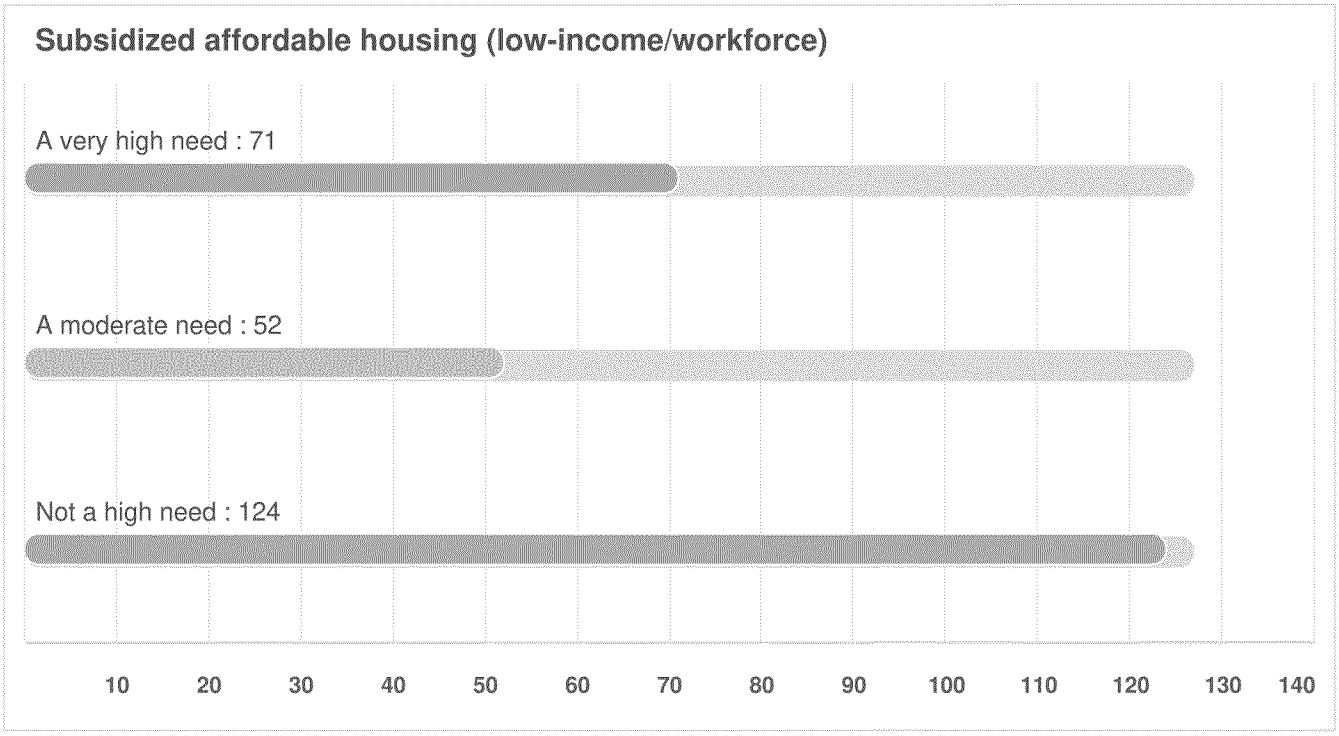



Assisted living or senior communities
A very high need : 51
A moderate need : 119
Not a high need : 77
10
20
30
40
50
60
70
80
90
100
110
120
130

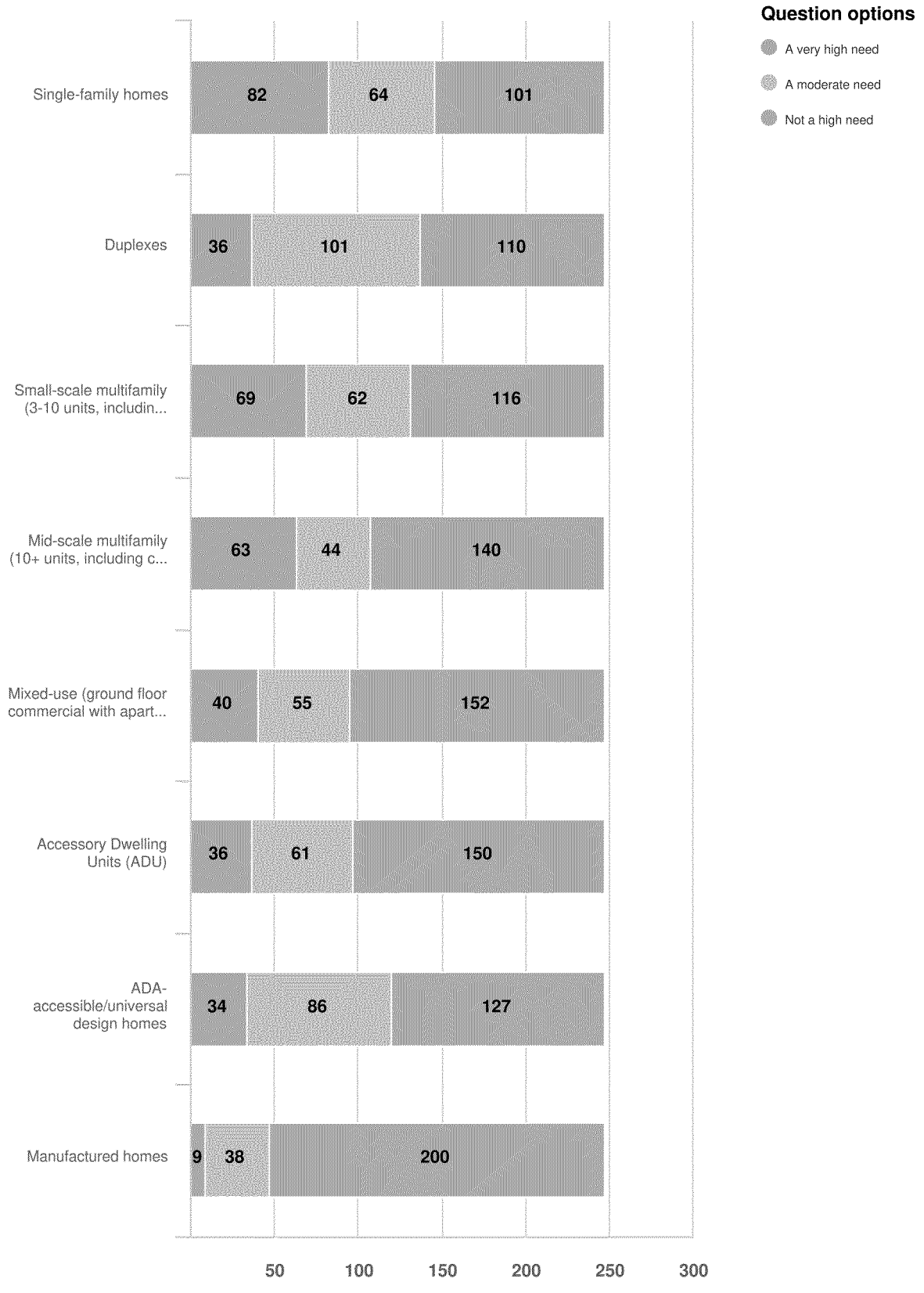

Other assisted living for individuals with disabilities
A very high need : 19
A moderate need : 100
Not a high need : 128
20
40
60
80
100
120
140

Transitional or temporary housing for individuals experiencing hardship and homelessness



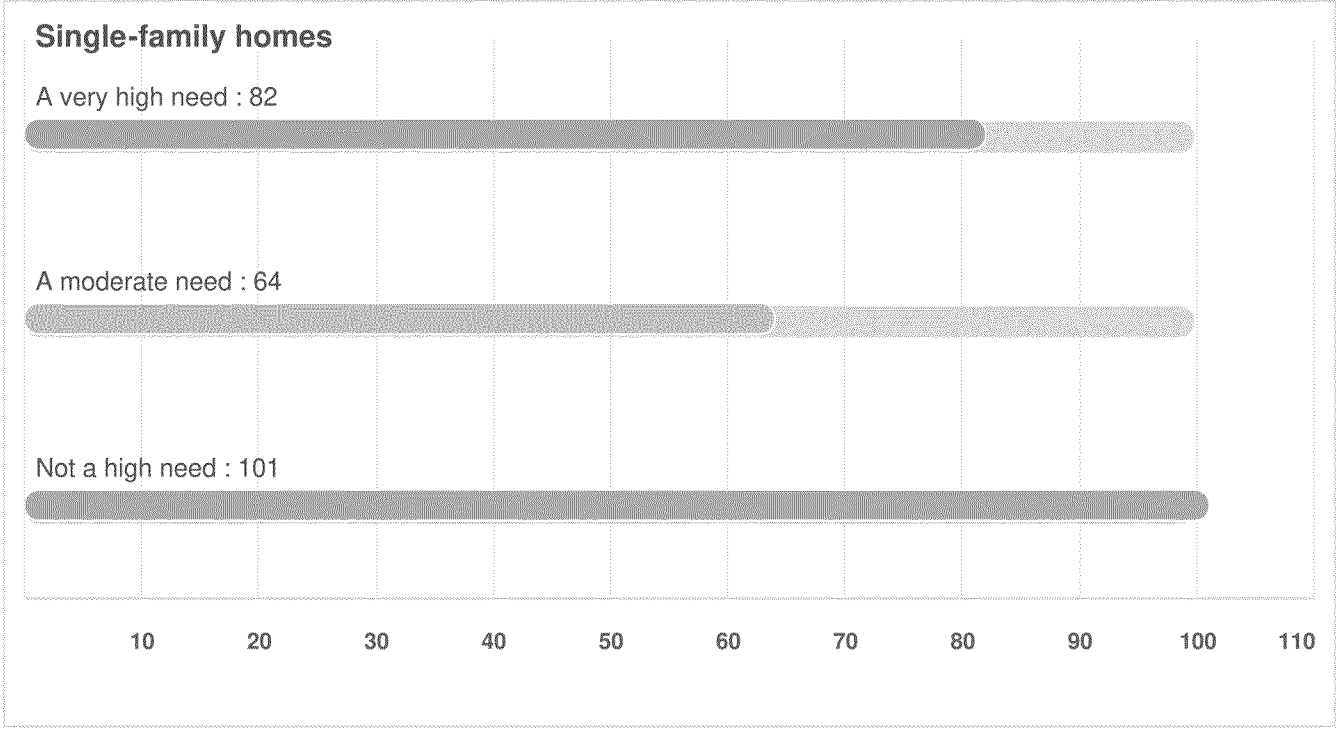

Subsidized affordable housing (low-income/workforce)
A very high need : 71
A moderate need : 52
Not a high need : 124
10
20
30
40
50
60
70
80
90
100
110
120
130
140

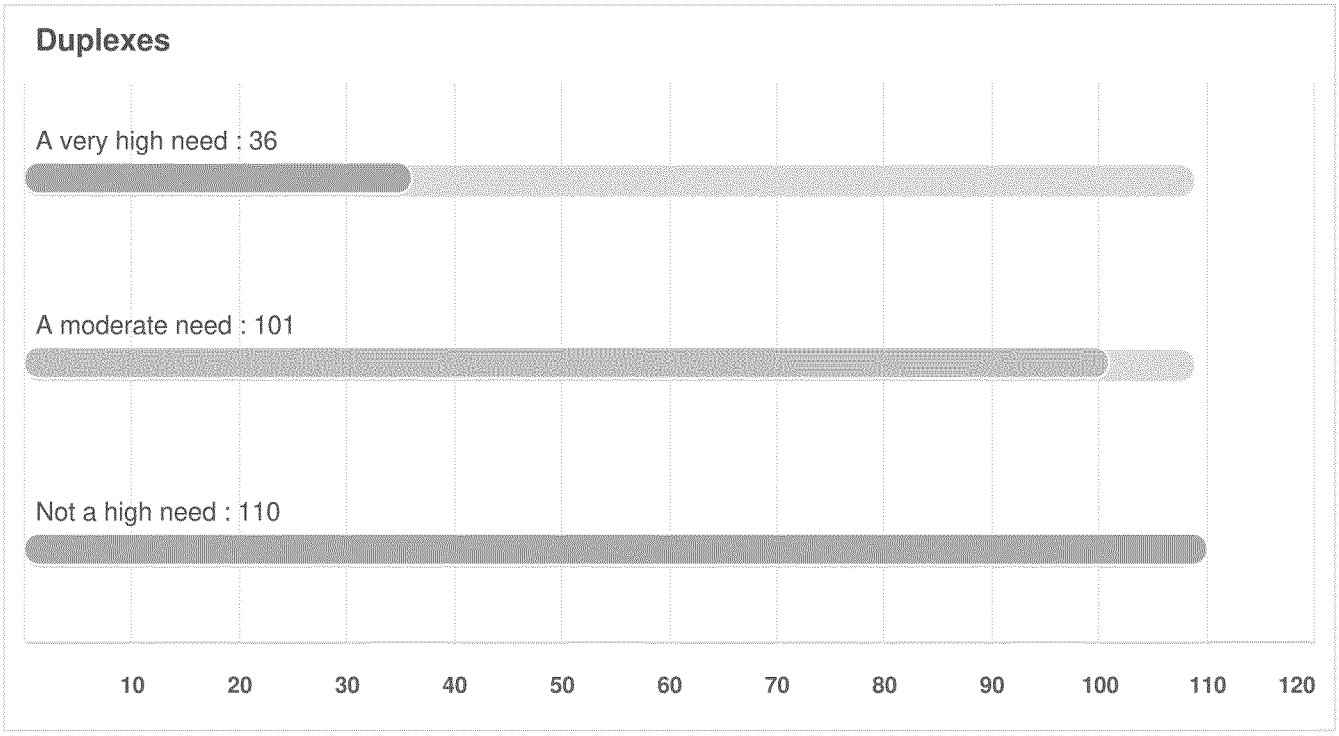
Q3 What types of housing structure options do you think are most needed in the community? (indicate the level of need for each...



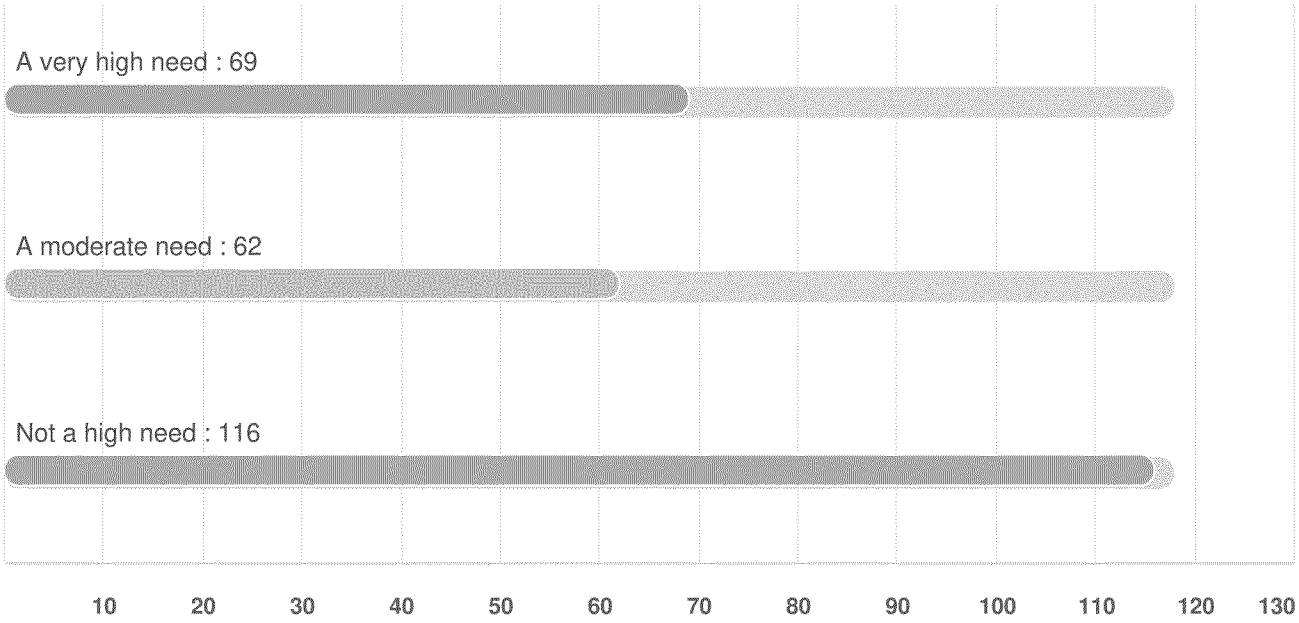
Mandatory Question (247 response(s))
Question type: Likert Question

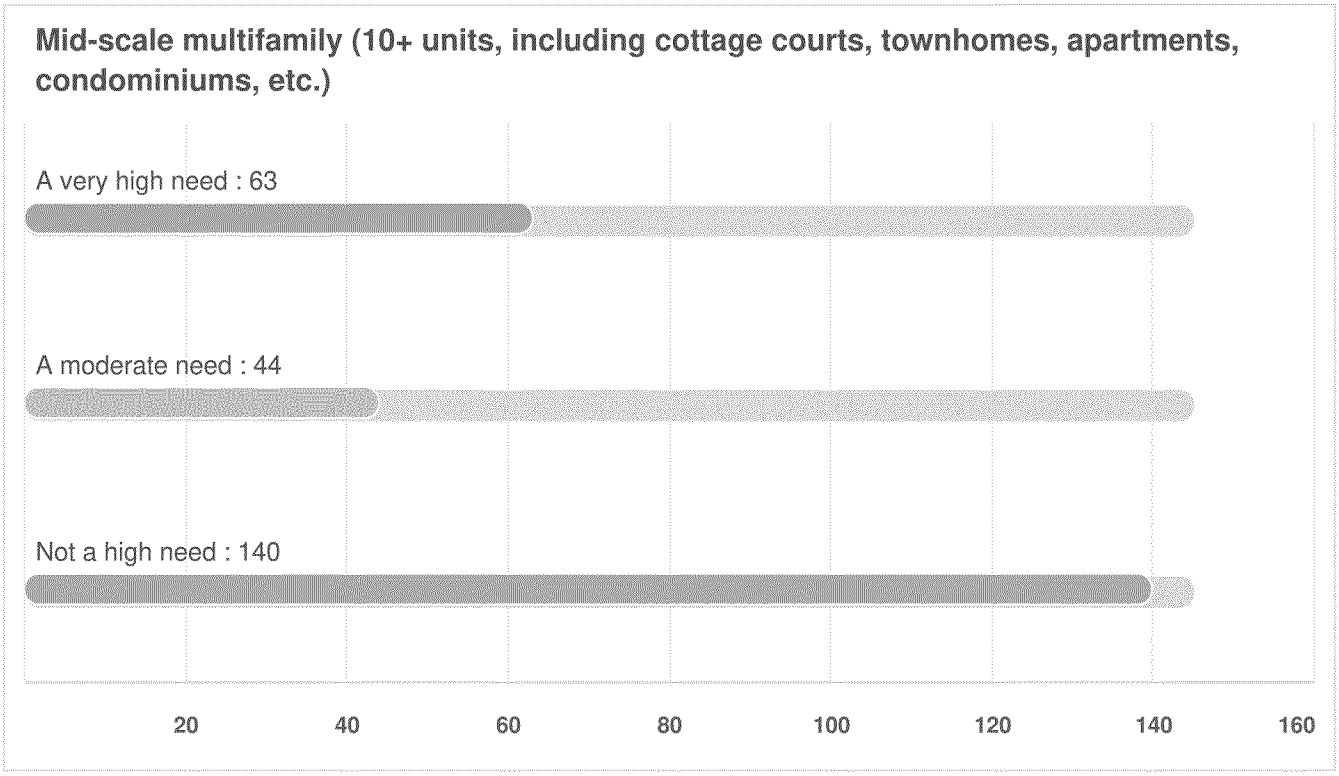
Q3 What types of housing structure options do you think are most needed in the community? (indicate the level of need for each...

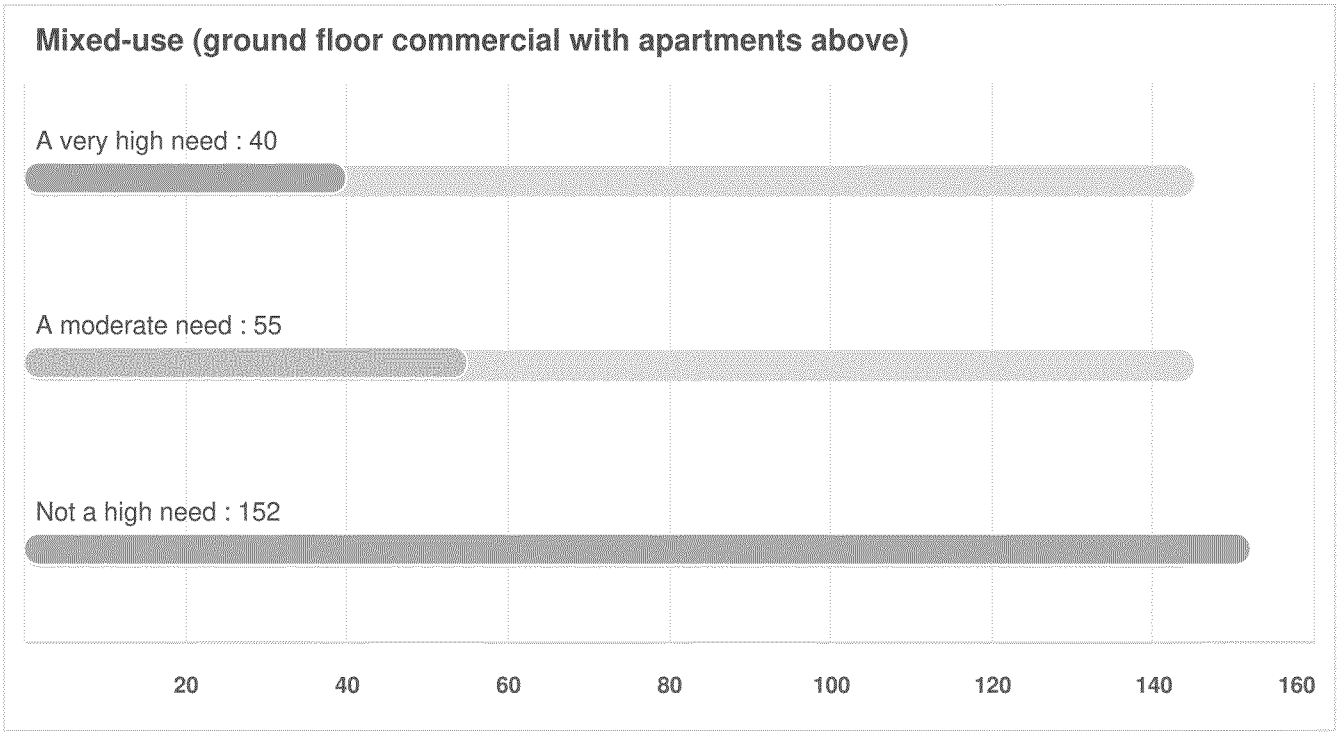


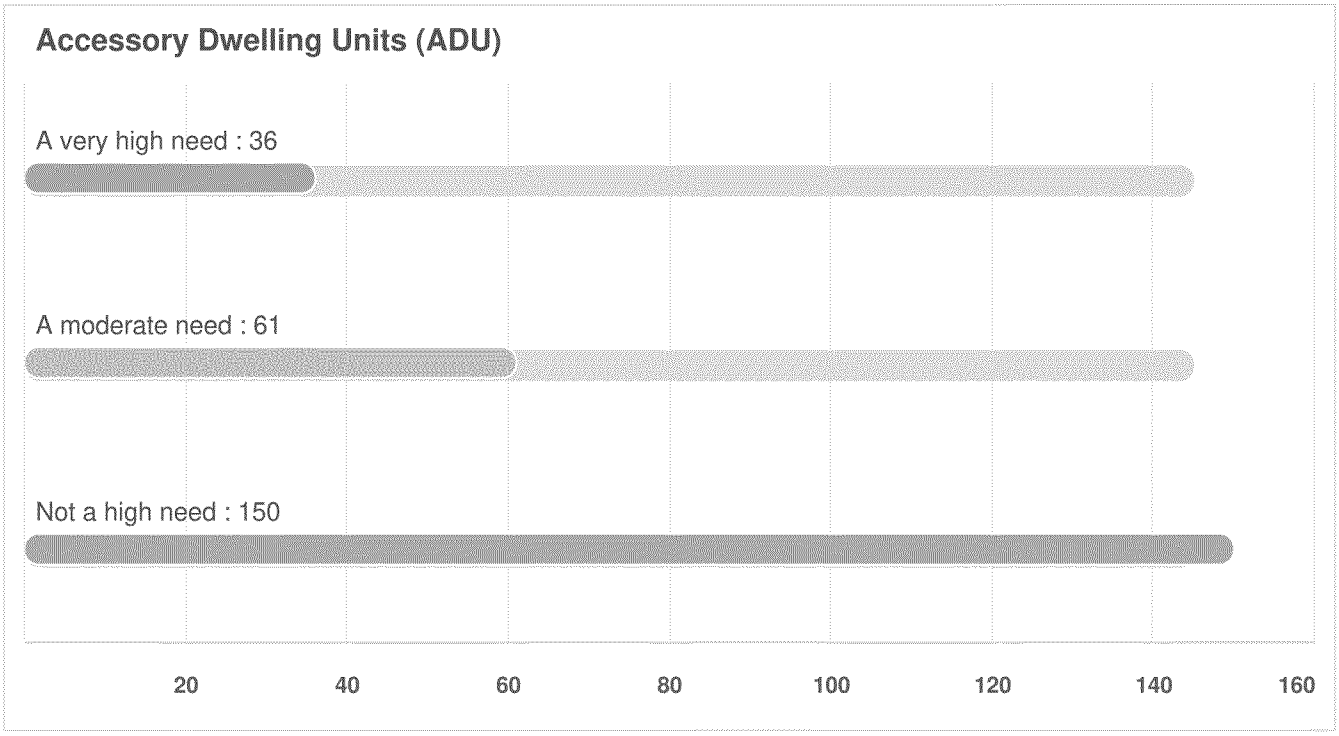

Duplexes
A very high need : 36
A moderate need : 101
Not a high need : 110
10
20
30
40
50
60
70
80
90
100
110
120

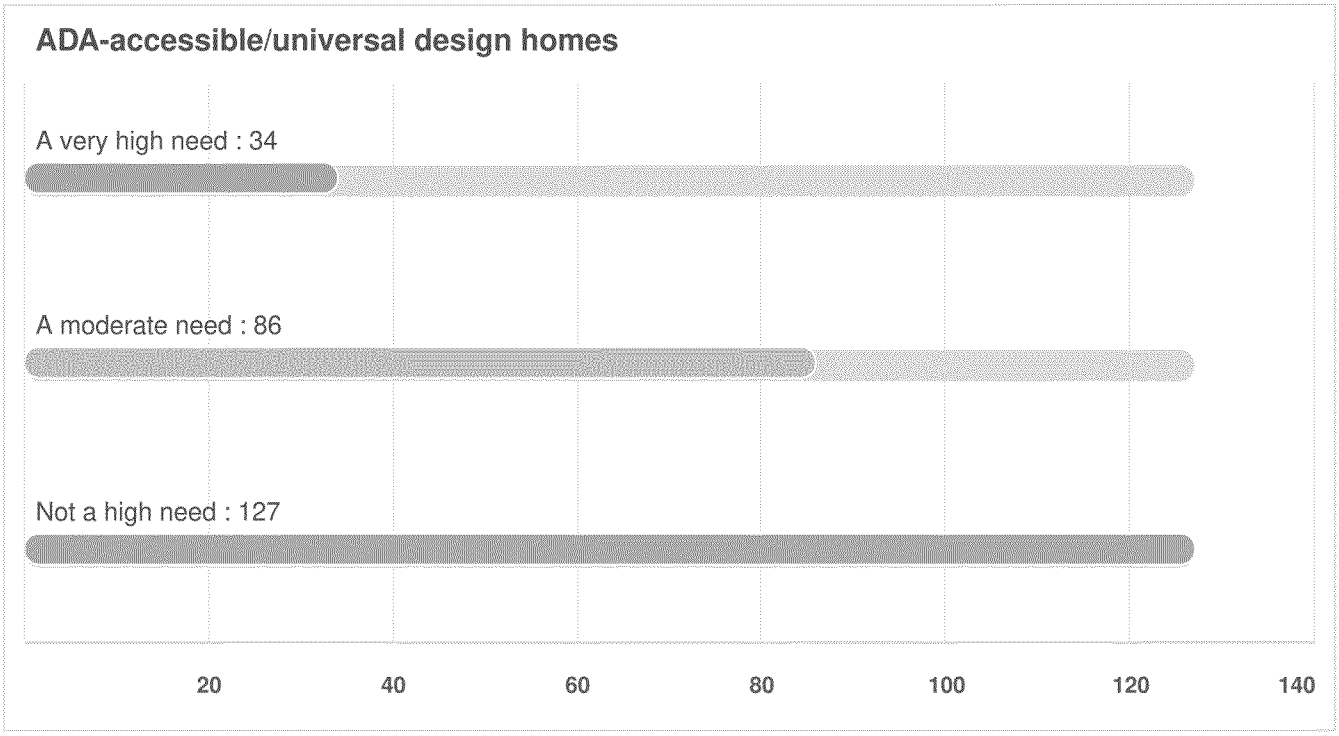
Small-scale multifamily (3-10 units, including triplexes, quads, cottage courts, townhomes, etc.).)

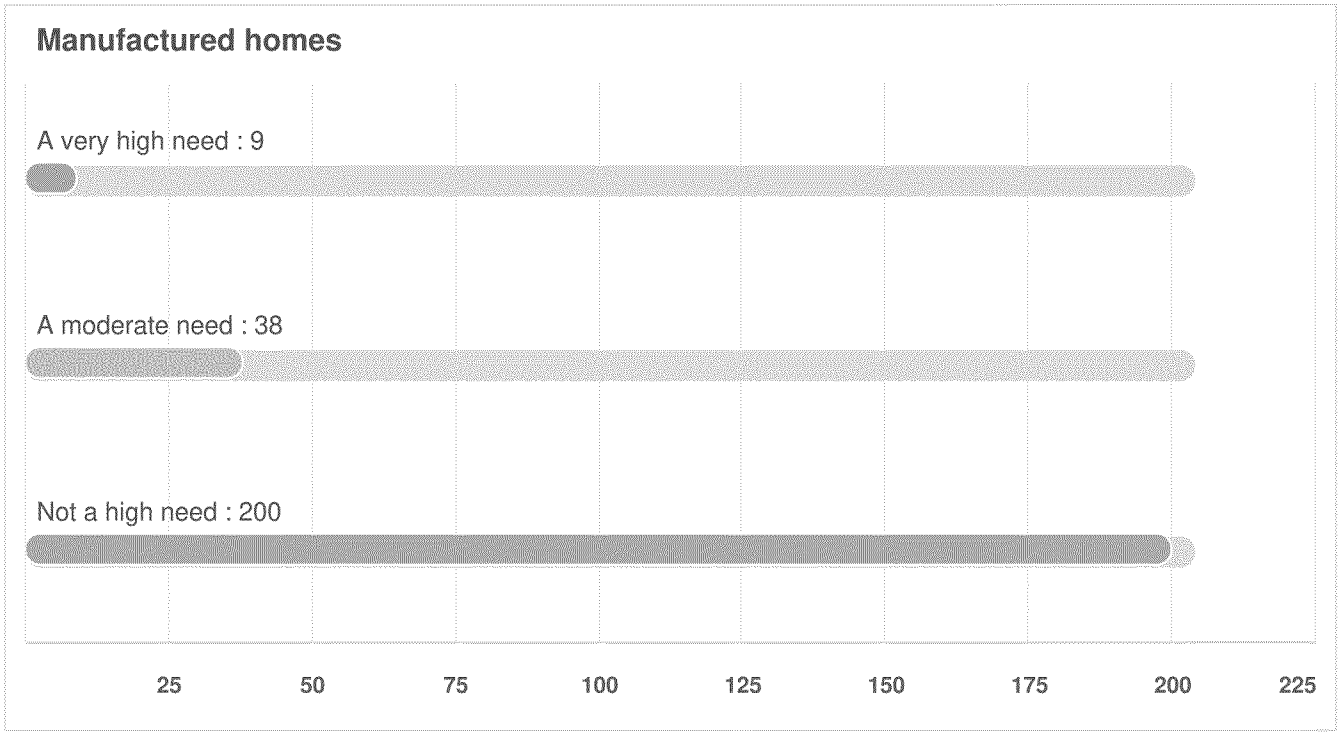



Mid-scale multifamily (10+ units, including cottage courts, townhomes, apartments, condominiums, etc.)
A very high need : 63
A moderate need : 44
Not a high need : 140
20
40
60
80
100
120
140
160

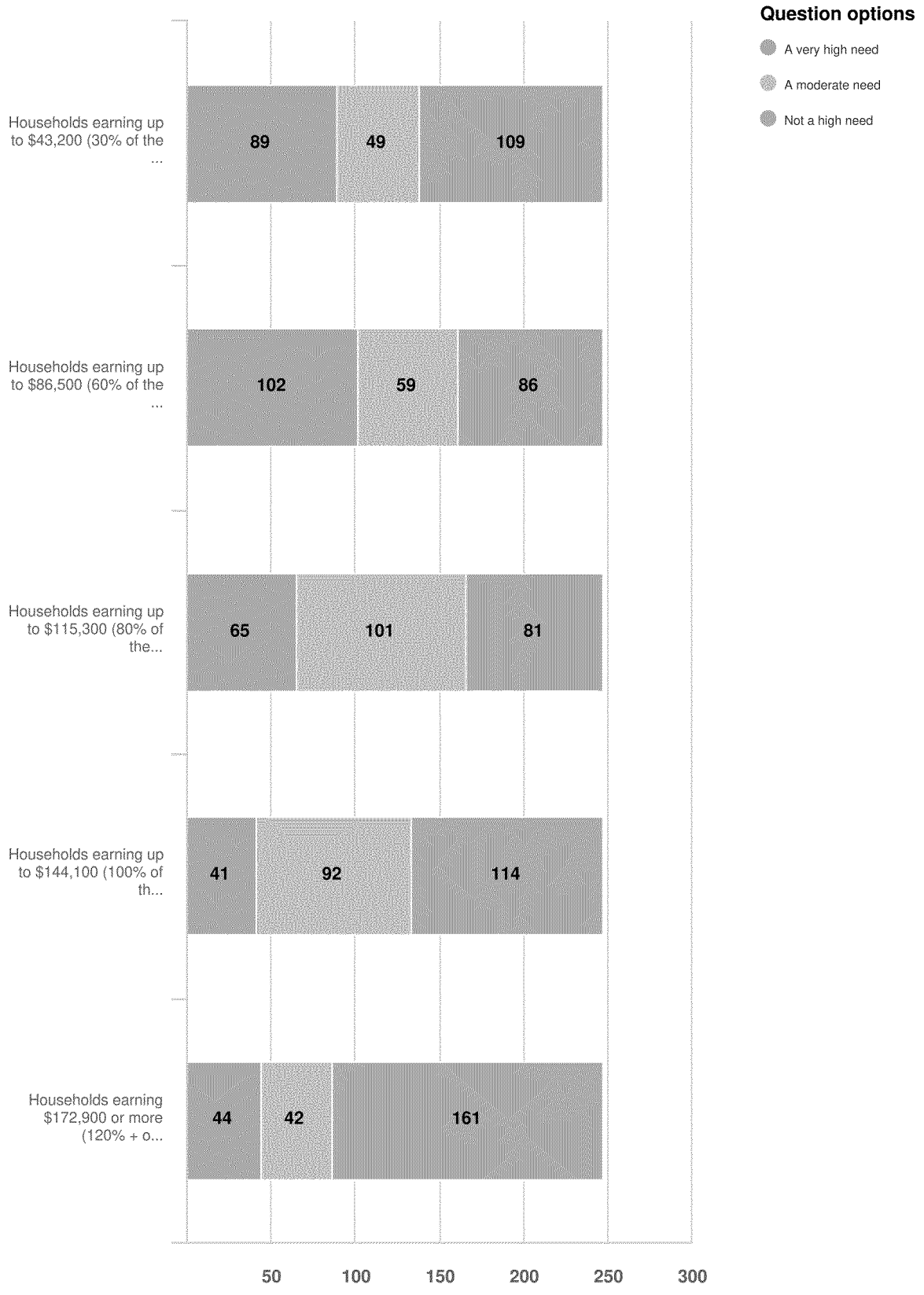

Mixed-use (ground floor commercial with apartments above)
A very high need : 40
A moderate need : 55
Not a high need : 152
20
40
60
80
100
120
140
160


Accessory Dwelling Units (ADU)
A very high need : 36
A moderate need : 61
Not a high need : 150
20
40
60
80
100
120
140
160


ADA-accessible/universal design homes
A very high need : 34
A moderate need : 86
Not a high need : 127
20
40
60
80
100
120
140

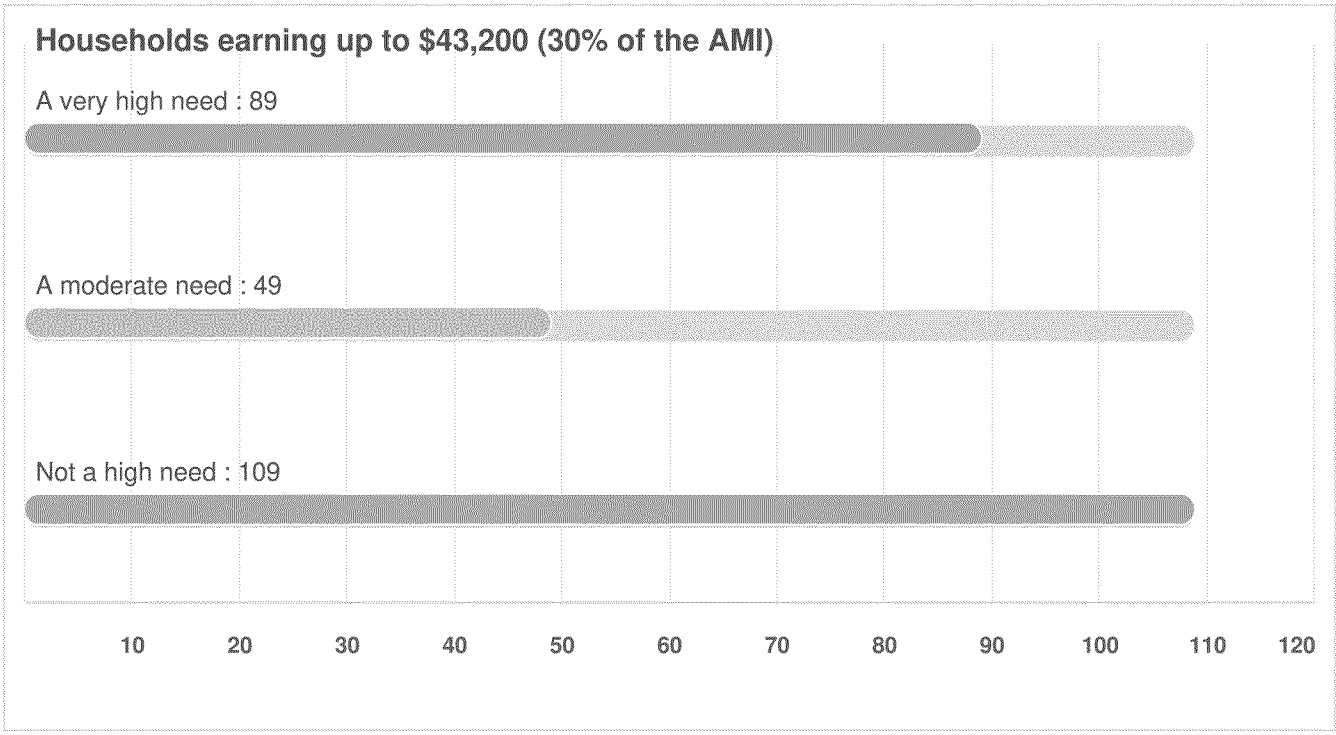

Manufactured homes
A very high need : 9
A moderate need : 38
Not a high need : 200
25
50
75
100
125
150
175
200
225

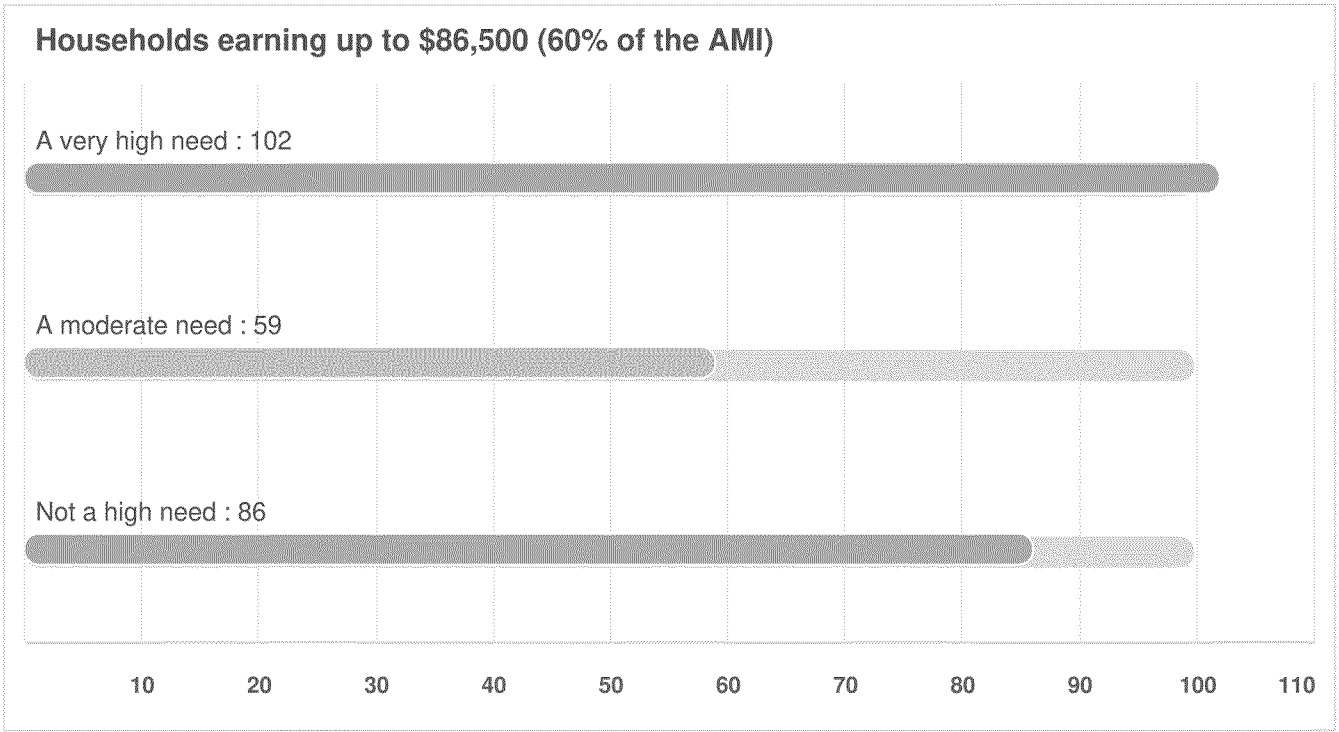
Q4 Based on your experience and personal community, which groups do you think have the highest need for housing in Superior? (...

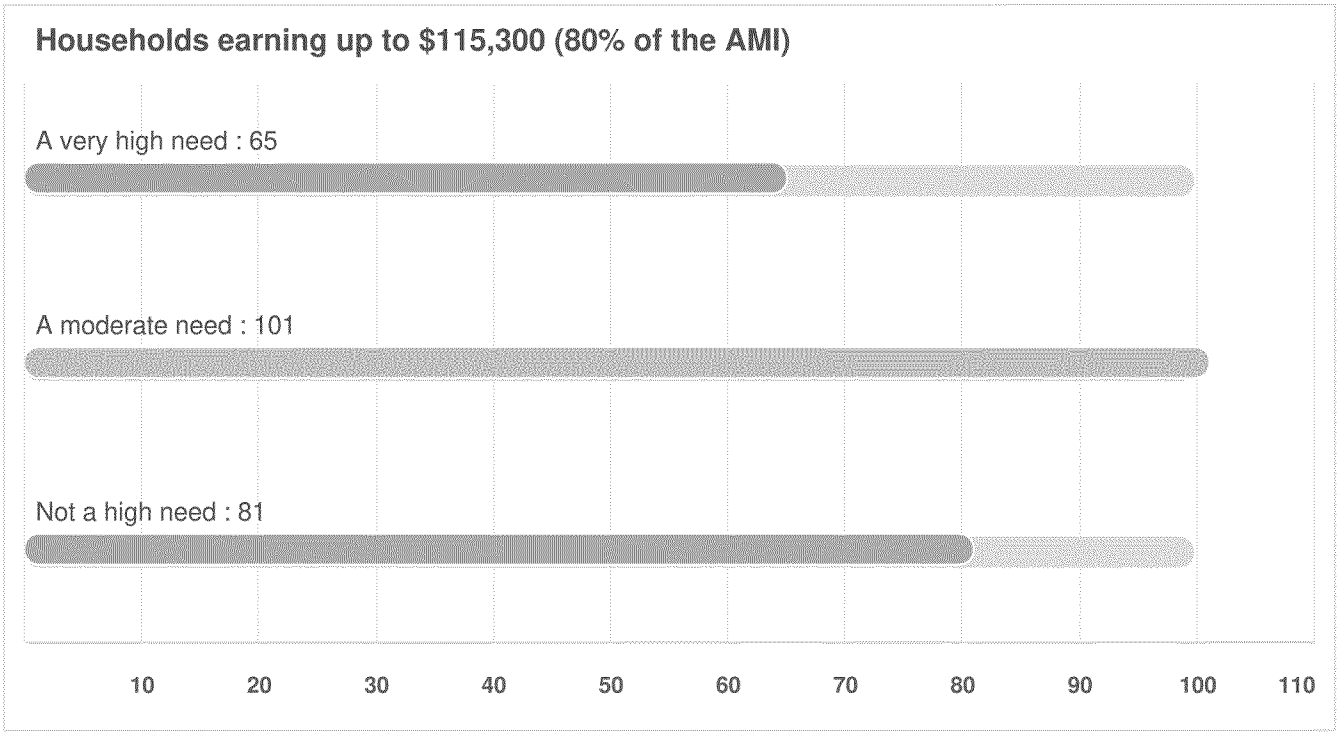


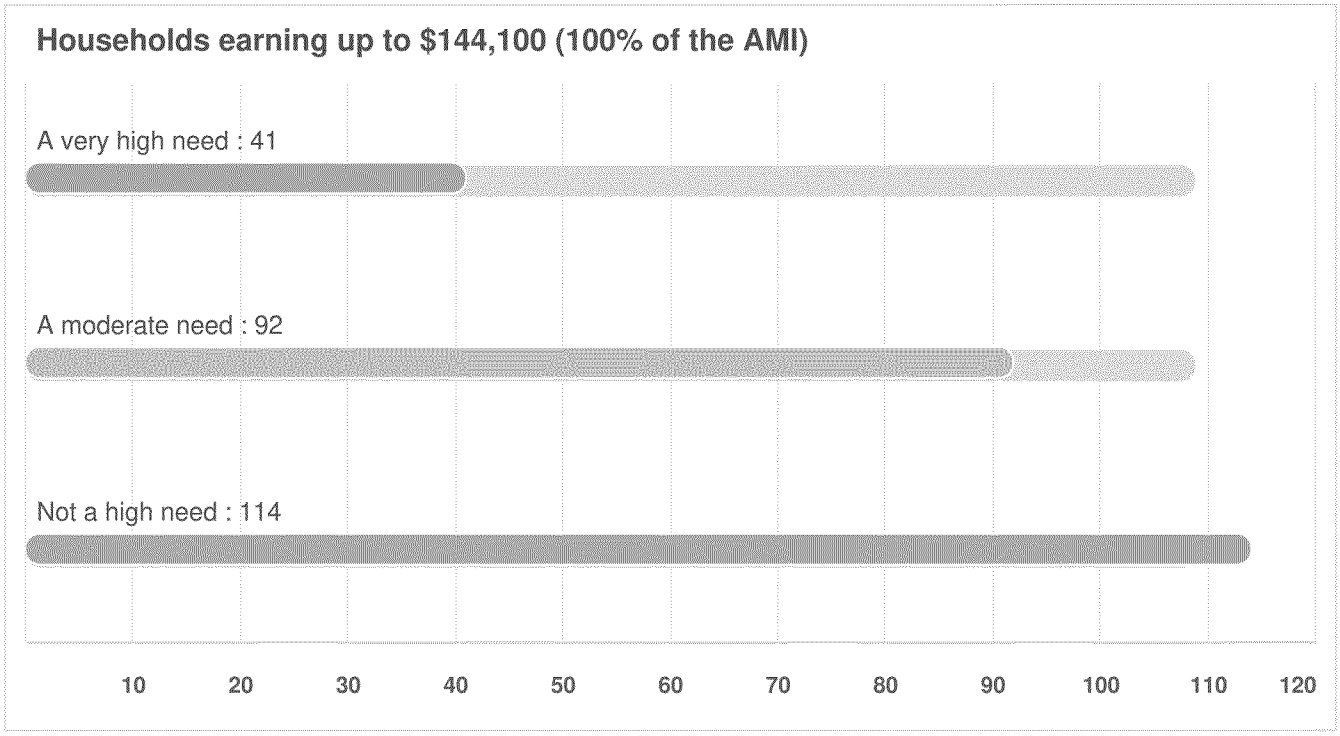
Mandatory Question (247 response(s))
Question type: Likert Question

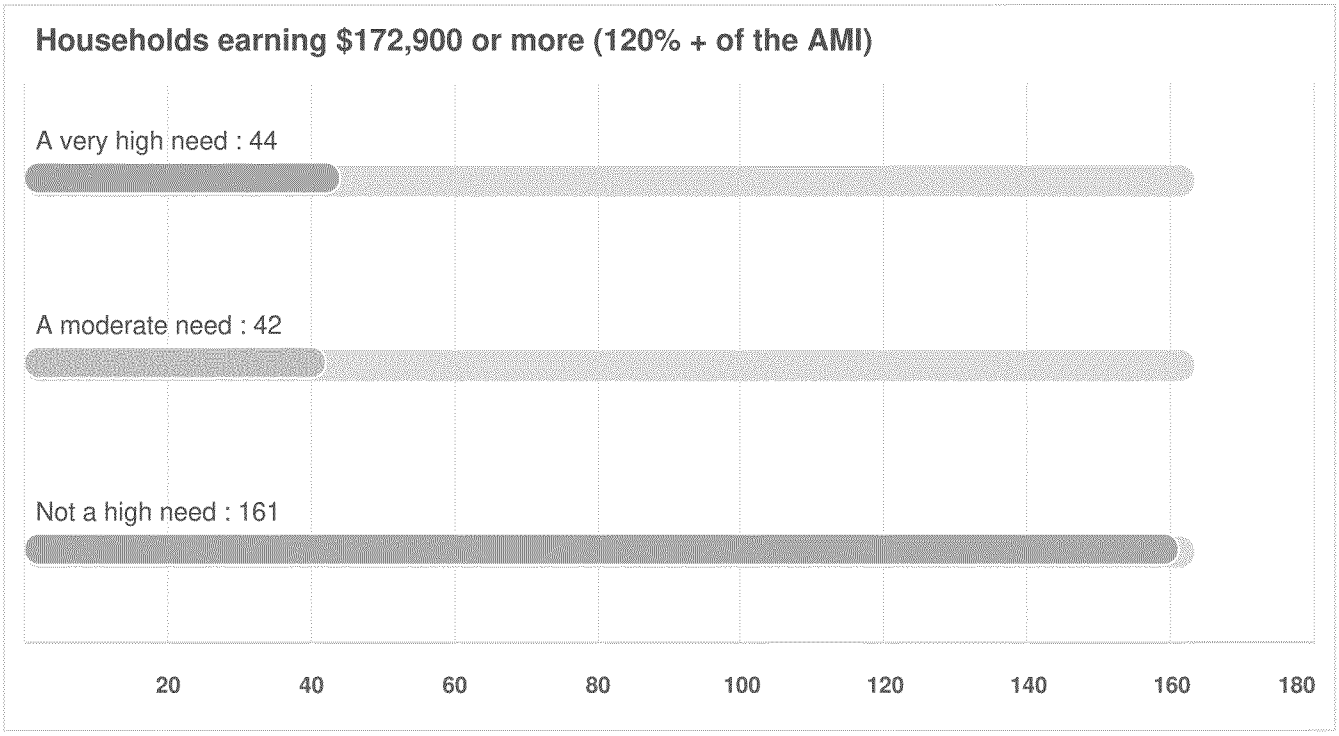
Q4 Based on your experience and personal community, which groups do you think have the highest need for housing in Superior? (...



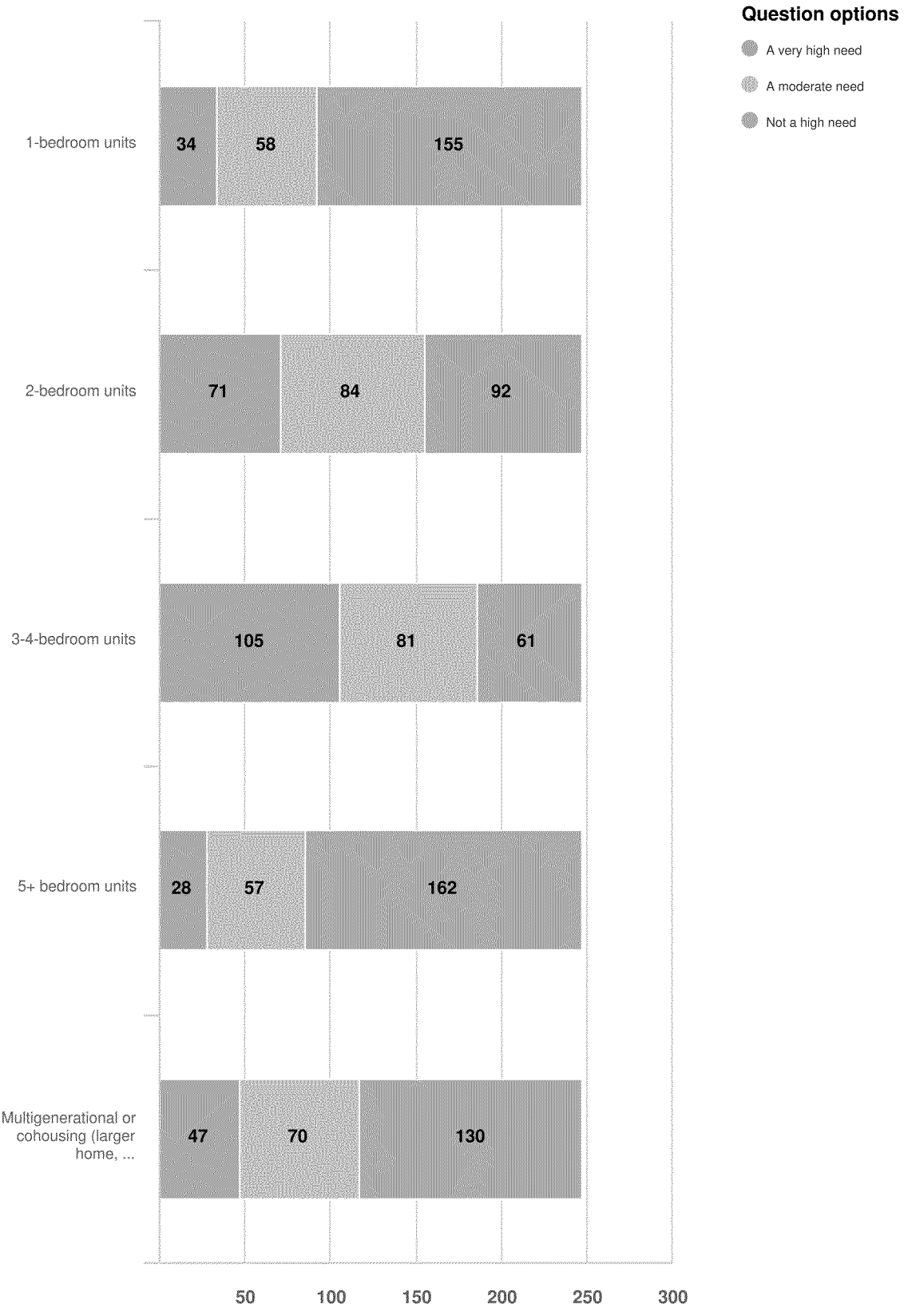

Households earning up to $86,500 (60% of the AMI)
A very high need : 102
A moderate need : 59
Not a high need : 86
10
20
30
40
50
60
70
80
90
100
110


Households earning up to $115,300 (80% of the AMI)
A very high need : 65
A moderate need : 101
Not a high need : 81
10
20
30
40
50
60
70
80
90
100
110


Households earning up to $144,100 (100% of the AMI)
A very high need : 41
A moderate need : 92
Not a high need : 114
10
20
30
40
50
60
70
80
90
100
110
120

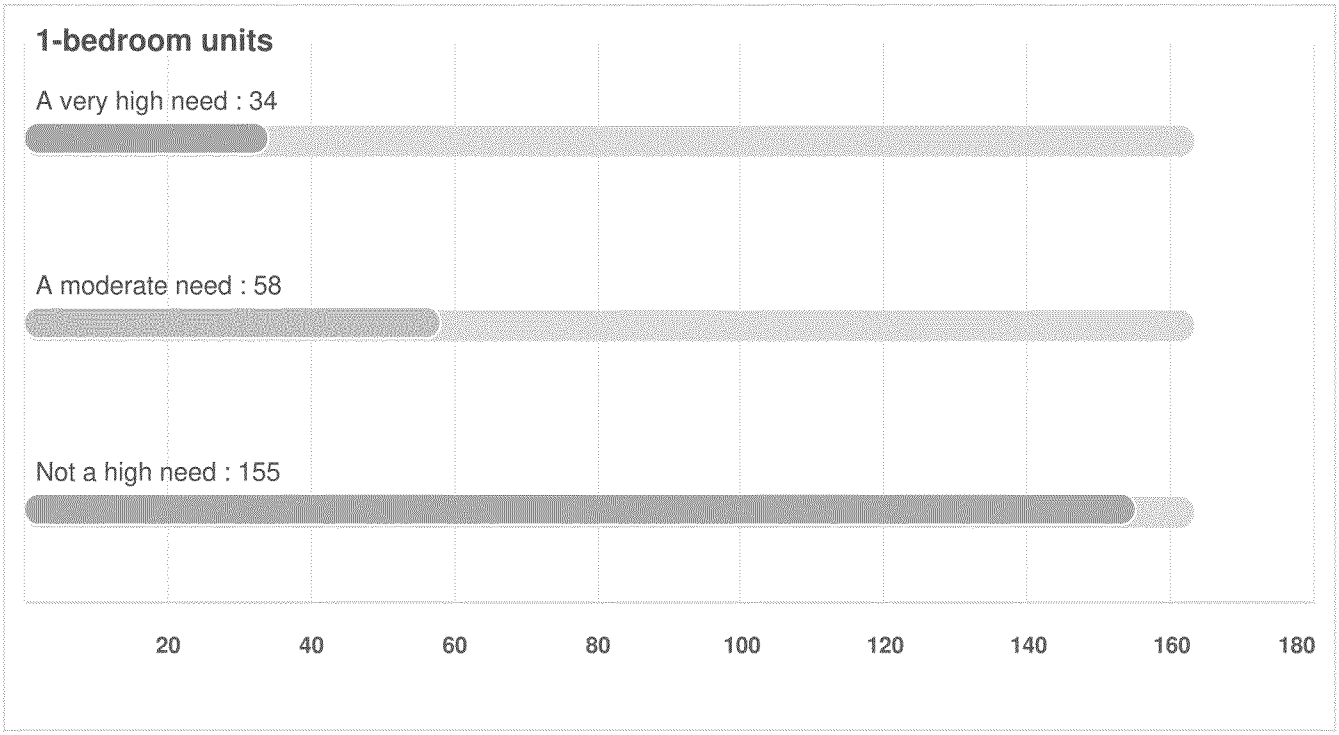

Households earning $172,900 or more (120% + of the AMI)
A very high need : 44
A moderate need : 42
Not a high need : 161
20
40
60
80
100
120
140
160
180

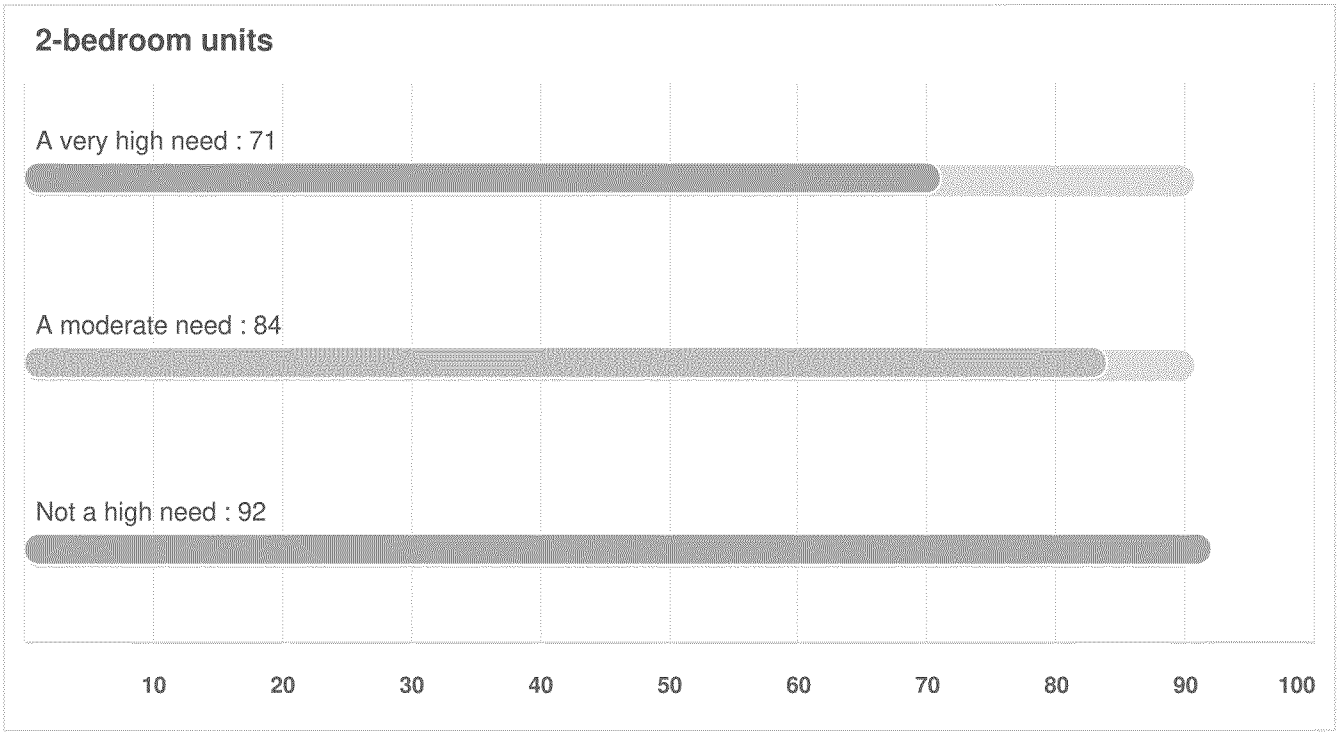
Q5 What types of housing size and layout options do you think are most needed in the community? (indicate the level of need fo...

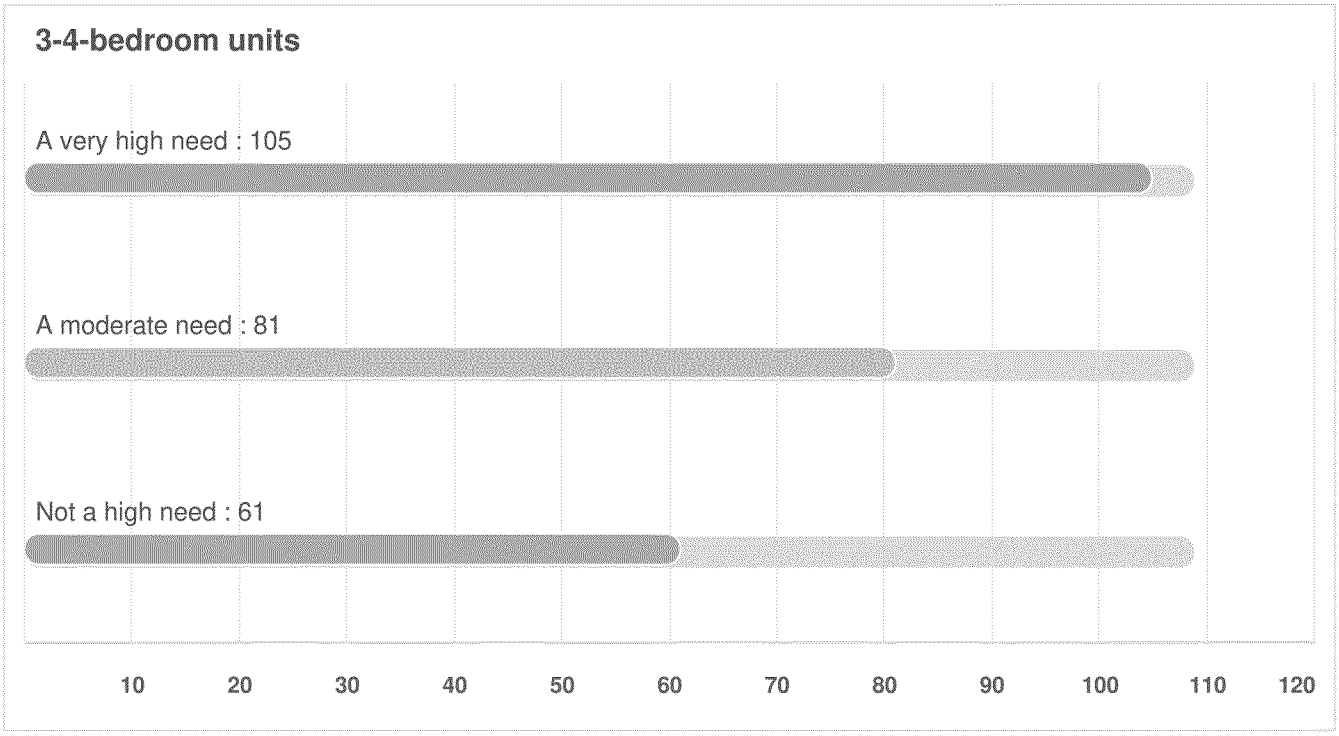


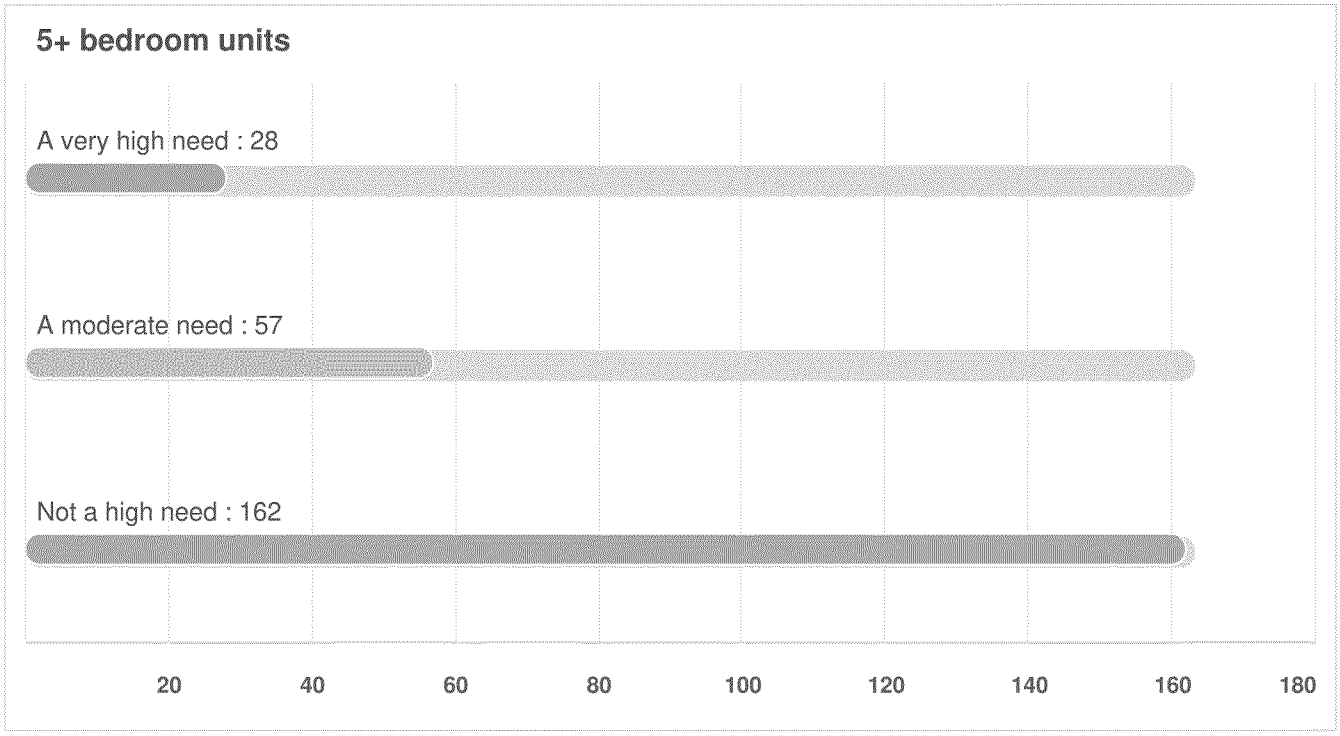
Mandatory Question (247 response(s))
Question type: Likert Question

Q5 What types of housing size and layout options do you think are most needed in the community? (indicate the level of need fo...

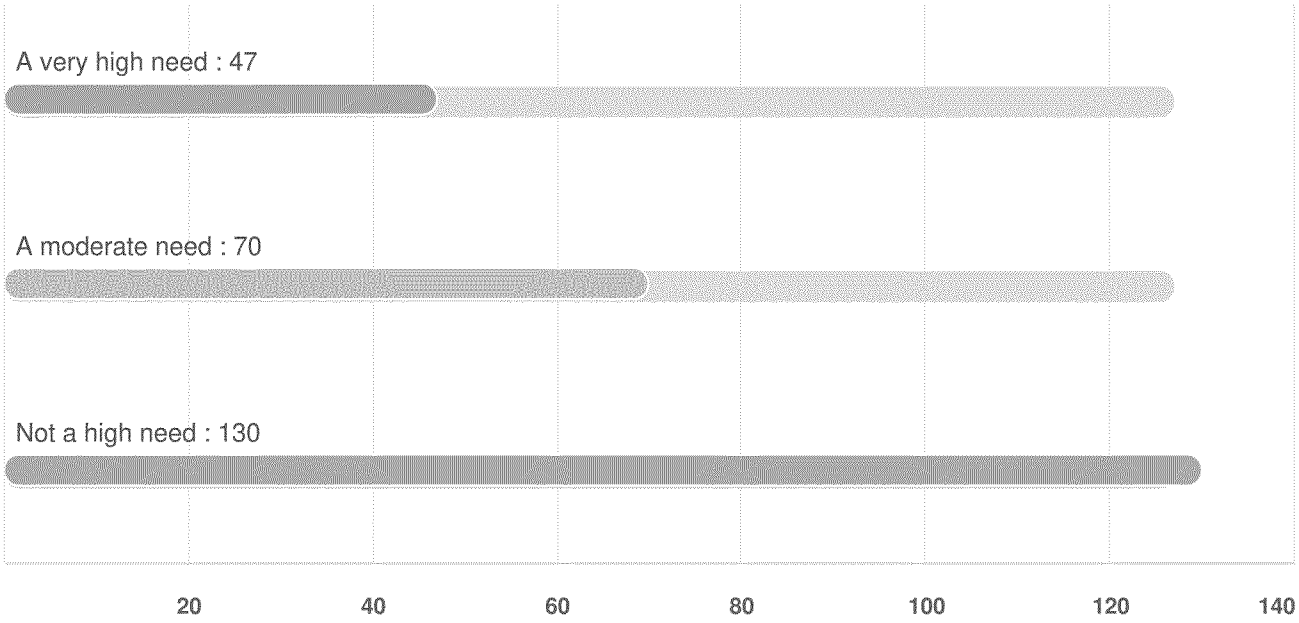



2-bedroom units
A very high need : 71
A moderate need : 84
Not a high need : 92
10
20
30
40
50
60
70
80
90
100


3-4-bedroom units
A very high need : 105
A moderate need : 81
Not a high need : 61
10
20
30
40
50
60
70
80
90
100
110
120


5+ bedroom units
A very high need : 28
A moderate need : 57
Not a high need : 162
20
40
60
80
100
120
140
160
180

Multigenerational or cohousing (larger home, sometimes with multiple kitchens and/or entrances)



Q6 What concerns do you have about housing and housing affordability specifically in

Superior looking forward to the next 10+ years?

chezgeoffroi 8/12/2023 03:38 PM	Affordable, walkable, mixed-use housing developments are desperately needed to achieve a balanced housing mix while addressing transportation needs and climate goals.
Jan krick 8/14/2023 07:42 PM	Rising cost.
jasonabair 8/21/2023 07:12 AM	The housing discussion is irrelevant unless and until the Town of Superior addresses the most pressing issue facing the town of Superior: Rocky Mountain Metropolitan Airport noise and lead pollution.
MattHorton 8/21/2023 07:17 AM	Any Affordable Housing needs to long term affordable, not just subsidised for the first resident.
ddsuperior2022 8/21/2023 07:21 AM	I'm afraid I'm going to be priced out of the market.
Jason 8/21/2023 07:23 AM	That we just don't have enough of it and the quality of life we enjoy will erode because we can't have people driving in from Aurora to work child care of at restaurants
John Bahr 8/21/2023 07:32 AM	None
welcht85 8/21/2023 07:34 AM	I would love to see Superior consider the thoughts, experiences, and needs of the older adults in our community. What does it take to age safely and comfortably in Superior. What options are available to older people if they can no longer stay in their home?
Zelda 8/21/2023 07:37 AM	Needs to be well thought out. I did not like the plan to take away the RTD parking lot that serves all Superior residents to put in affordable housing, where are we suppose to park? We definitely need senior citizen, disabled housing.
Paidipati 8/21/2023 07:50 AM	That teachers for our schools can live nearby

ncmalchow
8/21/2023 07:53 AM

The recent property tax assessment from the county was horrendous, especially since they blanket rejected everyone's appeal, so I have concerns about that going forward. A lot of medium density and high density housing are being built in and near Superior, or there are plans to. I have concerns on what that means for our town to support them, traffic (no one actually stops at stop signs anymore, a lot of fast e-bikes on sidewalks), schools, and roads (when they're not in great shape to begin with). I'm for affordable housing in theory, but without businesses here to employ people, we're just going to get people working in Denver living up here, and so not supporting our existing community.

myounce7673
8/21/2023 07:58 AM

That the town will bring down the value of everyone's homes by forcing "affordable housing" on the community.

jwehman
8/21/2023 08:07 AM

Sometimes, a place is not the place for everyone. Superior has traditionally been a quiet, community of families with children, sharing common goals of the nuclear family. Lately, it is apparent that the traditional family is no longer valued. What was once a nice, quaint, easy lifestyle living area has started to become a more urban, transitional, "place". Gone is the DNA and finger-prints of Superior. We have now started to become nothing more than what all other sub-urban centers are becoming: Apartments and "affordable" living (oh, don't forget "sustainable" :eye-roll:) Whatever - go ahead and build all the low-income apartments you guys are going to build...all in the name of "DEI" and "ESG". We will sell our properties and get the heck out of dodge and fine someplace that still values American traditions and lifestyles and wants to maintain focus on the family and the common aspirations that come with that.

8377
8/21/2023 08:12 AM

The Marshall fire created a new concern for housing in the Town. There are about 100 homeowners that cannot afford to rebuild due to costs of rebuilding and cannot sale their land due to the codes, restrictions and ordinances pricing out potential new home buyers. The building and planning department have put in place specifications and ordinances that have outpriced the Town of Superior from being able to allow landowners who lost their homes to sale their property to potential buyers to build a new home. Homeowners that have had destroyed structures are given the opportunity of rebates in fees and use taxes and other funds along with being able to opt out of fire suppression. Where homeowners that have had destroyed homes cannot give a potential buyer that option to build at a cost-effective price. The fees, waterline sizing to 1", and energy codes have priced out buyers in the burn area. Homeowners of destroyed homes have to rebuild first before selling their property if they are unable to return

to their homes due to cost of rebuilds. They have to build custom homes since a production builder is not offering the same pricing for a single lot rebuild. A manufactured home on a $300, 000 priced lot is not going to sale for profit and does not scale the product correctly. The Town staff should give the victims of a destroyed home the same opportunities to pass onto potential buyers as a rebuild homeowner. Being forced to rebuild and then sale a home is a hardship on our older residence and on our community. The Town of Louisville is getting all the potential new home buyers that are willing to build in the burn area. The Town of Superior staff needs to look at what Louisville is doing to capture the market of these buyers and help the rebuild of the Town to occur within a 5 year time period. Town staff should evaluate what they are mandating that does not agree with State codes and specifications and allow for reasonable rebuilding costs the same as Denver, Erie and Louisville.

Rick H
8/21/2023 08:14 AM

Superior is already overbuilt. We DO NOT want to live like rats. We are already "affordable" by Boulder County standards.

Abernathy
8/21/2023 08:20 AM

This entire project seems biased. The introductory email and this survey presume Superior needs more high-density, affordable housing. We are a small town (4 sq. mi. out of Boulder County's 740 sq. mi.) with very little developable land remaining, too much residential, and too little commercial. Most of the low-income jobs in this area are elsewhere in the region. Please rethink the way you approach the public about this topic. Do a broader regional analysis, and ask fairer, less-leading questions.

MSR
8/21/2023 08:17 AM

I have no concerns - to complete this survey you required me to have concerns and that has made this survey invalid. You wrote and scewed it to your beliefs so you can come back and say 'these are the top three concerns' that you wrote to support your business. You should have a option to say 'No Concerns'. We are still in the midst of rebuilding from the fire. Why does Superior need anything? We don't have industry to support, we are a four mile town that is out of space. Stop imposing your outside of Superior business, 'not for profit' or otherwise, where nothing is needed. We are landlocked by other towns including Boulder, Louisville, Broomfield please prey on them.

Foo Bar
8/21/2023 08:22 AM

Superior is a relatively small community surrounded by larger communities with more infrastructure and money to support the cost of affordable housing. Decisions by the trustees in the past has cost Superior significant money simply for the sake of preserving a few acres of land as open space and making it hard for developers to

	create a beautiful town. Instead, we have ugly single family and multi-family homes being built vertically in order to maximize the number of homes per acre. This creates a congestive and cramped atmosphere. Broomfield has surrounded Superior with ugly apartments, why does Superior need to add to that?
Brayr 8/21/2023 08:30 AM	cost of housing
jrstanton 8/21/2023 08:40 AM	I am concerned about lost property value due to the airport problems and an excess of housing on market as a result, along with a decline in property upkeep and maintenance.
Amanda Vaughan 8/21/2023 08:40 AM	That housing is just going to get more expensive and people with families will not be able to live here.
clwclw 8/21/2023 08:41 AM	Worried about home values dropping
KB 8/21/2023 08:51 AM	I have recently retired and eventually would like to no longer have yard maintenance, snow shoveling, etc. We would prefer to move to a three bedroom condo or ranch style townhome in Superior, the community we've come to love. One level living is rare in general, and especially in Superior, unless one resorts to renting an apartment.
leacach1 8/21/2023 08:47 AM	Currently, townhomes and cottage homes are very costly and scarce.
aeroncaben 8/21/2023 08:52 AM	I worry about the housing stock of Rock Creek aging and becoming yet another outdated suburban neighborhood. The quality of life is good here, but the housing stock is blah. Downtown Superior brings some alternatives, as well as development in original town. Not everyone wants or needs a big sprawling suburban house, and I'm glad Superior is beginning to have other choices. Ensuring that new housing stock is both quality in design, appropriate in scale, but still attainable by middle class families and individuals is the biggest challenge.
RH 8/21/2023 08:56 AM	I am a young professional who can't afford to live in Boulder, where I work, and found relatively affordable rental housing in Superior when I moved here in 2019. I am lucky to have a property owner who has

	not increased my rental rate, but I am living with the constant anxiety that they may in order to match surrounding rental rates. Those rates have increased dramatically even since 2019. I am already planning on leaving Superior, and CO, in the next several years almost exclusively because of housing affordability. I know I will not be able to afford a home here based on my income level (~60,000 pre tax). I love this town, but I won't be able to call it my permanent home forever.
zaid_haddad@hotmail.com 8/21/2023 09:16 AM	We don't need low income housing in Superior. This will decrease the quality of life and value of homes here. The only issue with living in Superior is the airport noise.
tagar 8/21/2023 09:22 AM	We are close to Broomfield and Westminster that already have affordable housing. Superior doesn't have a lot of developable land, so it should not be focus for the Town
Sally Lewis 8/21/2023 12:23 PM	Allowing lower end housing affecting my property value which is high.
jeff roberts 8/21/2023 09:31 AM	Sadly, rental units become future slums...and Superior already has too many. Superior should look at 1) Finishing the housing for those who lost their homes in the Marshall fire before taking on ANY new housing ideas. 2) Building OWNER OCCUPIED (not available to rent) single family or duplex houses. 3) Severely restricting rental of any properties in Superior to maintain quality of the town (look at the old Martin Acres subdivision in Boulder for reference.
CarolN 8/21/2023 09:52 AM	1) proper zoning: keeping commercial and residential sections separate/symbiotic 2) better access to and promoting more mass transportation options
The only thing 8/21/2023 09:48 AM	Low income housing will make Superior a less desirable place to live. Focusing on brining great employers who pay high salaries will ensure residents are able to afford homes in this area.
drexelbrookian 8/21/2023 09:58 AM	we already have too many houses
drexelbrookian 8/21/2023 10:01 AM	Boulder County is not affordable, nothing you can do will make it affordable. Superior has way too many people already. Stop building.

bryanpeck3 8/21/2023 10:07 AM	Losing undeveloped areas to more houses and more traffic
Mary 8/21/2023 10:10 AM	I would like to see affordability for first-time homebuyers. These people have no equity in real estate, and even though they may have good earning income, mortgages are out of reach for them.
jbutt 8/21/2023 10:15 AM	We want to make sure future housing conforms to the existing character of Superior (mostly signal family homes with a modest amount of apartment complexes and townhomes as more affordable options). A significant increase in high density housing would be a detractor to the appeal of this community.
The_don 8/21/2023 10:24 AM	Prices will continue to rise and only the wealthy will be able to purchase property. Low income families will be unable to buy their own homes and Superior will turn into a town full of renters/a transient population which hurts the community in terms of continuity and dilutes civic pride.
stsamuel 8/21/2023 10:26 AM	No where nearby to downsize to (i.e. smaller standalone house) that's affordable and has a land buffer between neighbors.
Karen Zeid 8/21/2023 11:02 AM	No place for the working class, people with low income and those needing supported living. They need not only a roof, but community and supports. Build with intention
WhatsSup 8/21/2023 11:12 AM	Worried Boulder will try to push any “affordable housing” in Superior rather than spreading it to larger, developing areas.
Janice Janus 8/21/2023 11:43 AM	Not to bring down property values
Brian 8/21/2023 12:00 PM	Superior doesn't need to fund affordable housing like Boulder does.
No 8/21/2023 12:06 PM	Regulation upon regulation driving up the cost, employing more lawyers than builders, and ensuring that any suggested development can be entangled in the courts for years. It's amazing to me that "high density" development wasn't even considered as an option in this

	survey. This is by far the most environmentally effective way to house people and should be encouraged or even required to make the best use of our limited land.
Superior 8/21/2023 12:25 PM	Too much housing built too close in Downtown Superior without rational parking allowances and open space. Superior is unique community and highly desirable, and market forces should drive supply and demand without govt intervention.
gmail@gmail.com 8/21/2023 12:26 PM	we don't need any more housing, there are plenty of other communities to satisfy this need that are close to superior. superior is becoming over developed.
AW 8/21/2023 01:01 PM	There is already not affordable housing and I don't see any improvements actually happening.
AFlinn2Lee 8/21/2023 02:08 PM	Increase in homelessness among full time workers due to housing costs
Juji 8/21/2023 02:37 PM	I've lived here for over 30 years and it has been going downhill with the unattended rental homes that are a disgrace to our community as well as the increased traffic.
jack 8/21/2023 03:48 PM	Superior is a suburban community featuring clean air, low tralc volumes, mountain views, and ample open space. These features are highly attractive to people who want to raise a family, so it is understandable that many people would want to move here and, as a consequence, drive up housing prices. What we need to understand is that the current, high density development being built now is already degrading the very things that attract people to Superior. More development with more crowding and more pressure on the area's limited resources is not the answer and is delnitely NOT in the interest of Superior home owners. (Remember, Superior ran out of water trying to lght the last lre, what could happen the next time with even more high density housing?) We must learn to respect the limitations of our environment and the coming challenges of climate change.
None 8/21/2023 04:33 PM	Lack of smaller ranch homes for downsizing seniors who want to continue to live in Superior.

Kristin 8/21/2023 06:09 PM	There is currently no limit on rent increases. Single family homes in Superior are too expensive for us to afford.
Duchess 8/21/2023 07:29 PM	That a family of 4 with parents working 3 jobs to earn at least $100k annually is still priced out of the available homes or what's available is too small (only 2bdrms/an apt or condo/townhome less than 1400sq ft).
mondrowe 8/21/2023 08:32 PM	We have enough houses in Superior. adding more only reduces the quality of life here. Our Town Board's obligations are to the current residents of the town, NOT to some non-existance non-resident potential buyers.
Nova 8/21/2023 09:08 PM	We don't want to price out people we want to work here (teachers, police, service industry, etc) and we don't want to price out young families
bingslanding 8/21/2023 09:33 PM	Too much development
More commercial less residential 8/21/2023 09:39 PM	Please don't develop more residential properties in Superior. Consider all of the existing residents who bought properties to enjoy the space. This town is only 4 sq miles and we need a commercial tax base. Residential taxes don't do much. People will always want to live her to work in Boulder no matter how many houses are built, they'll say there aren't enough. The reason it costs a lot to live here is because everybody wants to live here. Don't ruin it for the existing residents. There's a reason why the entire border of Boulder county is jammed with apartments all down Coalton road including converting the Flatirons mall. Plenty of more affordable housing all along Coalton across the county border.
ETGL 8/21/2023 10:15 PM	That Superior turns into another run of mill town, trying to satisfy everyone, and satisfying no one. Seeing the quality of Superior take a nosedive. Don't allow Superior to become another "Denver", trying to be all things to all people. Don't allow Superior to become just another average town.
Chenn6keri 8/22/2023 04:28 AM	Things are already not affordable and I see that trend continuing which means many people including the younger generation & older generations will not have home ownership opportunities. Also existing homeowners who want to stay in Colorado will not be able to

	afford to downsize. We're a Marshall fire family who lost our rental in the fire & to move back we are paying 65% more then before the fire in rent. We cannot afford to do this in the long term yet our kids are deeply rooted here.
lkvasnicka 8/22/2023 04:41 AM	Housing is very limited and no longer affordable in Superior. It's becoming more like the City of Boulder and too expensive to buy here.
SuperiorJane 8/22/2023 07:05 AM	Lack of diversity
Tricia 8/22/2023 07:16 AM	That Superior will not have young families as there will not be affordable housing for young families.
rterpstra 8/22/2023 09:40 AM	Resale value
juliaann11 8/22/2023 09:47 AM	Superior already has limited diversity and the rising cost of housing (combined with high interest rates) is making purchasing a new house here inaccessible for all but the top few percent. Current interest rates also make it extremely difficult for people to consider moving, which further limits available inventory because people can be locked into homes that aren't the best fit for them anymore because many of us purchased homes when interest rates were in the 2s, so taking the same loan out on a new house would significantly increase monthly payments.
MisterSelby 8/22/2023 11:00 AM	This area was planned and built for single family residential homes. The infrastructure, particularly water supply & water treatment, but also traffic, road quality, storm drainage, cannot support high-density (large or small) developments. Large, complex, high-density development (e.g. the Sports Stable area) exacerbates the pressure on these systems and existing residents. If you want to make housing less costly, then seriously consider how the county and town can make it faster and less burdensome for developers. That means less complexity in review and approval, greater sense of urgency in responses, stop focusing on green codes, instead focus on health and safety.
Superior resident 8/22/2023 12:56 PM	Superior does not need more housing right now. Town of Superior needs to prioritize the quality of life for existing residents, which is

	currently NONEXISTENT due to the constant unbearable airport noise. Nobody will want to live in Superior if this airport situation is not addressed.
CM 8/22/2023 08:34 PM	There is too much housing, especially in downtown Superior. The housing/apartments are packed in, very little space between housing units which decreases the quality of living dramatically, and makes it very difficult to have sustainable infrastructure. Adding more housing of any type will continue to reduce the quality of life in Superior. The Town Board's obligations are to the current residents of the town, NOT to some non-existent, non-resident potential buyers.
asdf 8/22/2023 09:11 PM	worried about overcrowding and high traffic volumes due to hi density assistance housing
Anonymous 8/23/2023 07:53 AM	Superior already lacks diversity and is losing people who can no longer afford a good life here--specifically young families (as evidenced by the declining school enrollment over recent years). If nothing changes re: affordability (and housing is arguably the biggest element of affordability), the community will no longer be attractive to those who can participate and help it thrive, businesses will suffer and go elsewhere, and growth and progress will stagnate.
Kathrynsg 8/23/2023 08:41 AM	Housing needs stay affordable so we can house as many people as possible
nevermind 8/23/2023 09:19 AM	too many apartments and not enough single family housing- wrecking our town with people stacked on top of each other, traffic and not enough amenities. very, very poorly planned.
SEEDS 8/23/2023 09:55 AM	The lack of affordable housing options in Superior is a severe problem. This imbalance further increases employment turnover of the workforce in Superior, adds to increased carbon pollution from additional vehicles commuting into Superior because there is no affordable housing that would allow families to live and work in Superior. The same problem exists for lower income seniors who lost homes to the Marshall Fire and are struggling to remain in the community they worked hard to create.
Bob McLaren 8/23/2023 01:14 PM	There will be more residential area that need retail businesses.

Britdj 8/23/2023 07:26 PM	That we won't be able to afford to buy.
vaucm 8/24/2023 09:47 AM	I am not against subsidies if managed correctly. We must ensure we do NOT disincentivize people to improve their economic condition.
Anonymous 8/24/2023 03:09 PM	No concerns
Anonymous 8/25/2023 01:15 AM	RMMA airport noise and toxic dump over Superior makes the area less inhabitable and less desirable, harder to sell a home in S Suoerior, and the JeffCo airport is causing Superior residents who would otherwise stay, to sell and move
Anonymous 8/25/2023 07:02 AM	The cost of renting or buying a home in Superior is out of control. While I could sell my home for a nice sum, I would not be able to buy a home in Superior to remain here. I know folks who have homes that are indicating sale prices of $850,000 - $1mil and they couldn't sell and downsize within Superior. So much of the new builds are too expensive as well and they have a style (urban living) that doesn't suit older folks whose kids are getting ready to head to college.
Anonymous 8/25/2023 05:31 PM	none
Anonymous 8/25/2023 08:34 PM	stop going woke
Anonymous 8/25/2023 10:03 PM	I'd like it to continue to have an upscale like "flavor" to it
Anonymous 8/26/2023 07:13 AM	I'm from Portland OR. In a very short time housing became so unaffordable that any chance of helping the homeless situation became unattainable
Anonymous 8/26/2023 11:12 AM	Only the rich will be able to live here, and it will change the neighborhood, and new families, which is what we need again in Rock Creek, will not be able to leave here.
Anonymous	Schools will have low enrollment due to the extreme high cost of

8/26/2023 11:12 AM	housing. So families will not be able to afford housing.
Anonymous 8/26/2023 11:18 AM	At this time and the foreseeable future, Superior is becoming an area that we cannot afford to live in. We are currently renting and would like to buy. However the area seems to be rapidly growing out of our range.
Anonymous 8/26/2023 11:19 AM	Volume of traffic
Anonymous 8/26/2023 11:20 AM	There is a high need for ranch townhomes with bedroom on main floor. Or a one story apartment that has an elevator for us older folks.
Anonymous 8/26/2023 11:22 AM	.
Anonymous 8/26/2023 11:23 AM	There won't be any.
Anonymous 8/26/2023 11:23 AM	Losing our community as it is now. I have lived through housing changes that have destroyed my community and want to avoid that in the future
Anonymous 8/26/2023 11:25 AM	Exclusionary practices will create a virtual if not actual, gated community.
Anonymous 8/26/2023 11:23 AM	We are pricing out demographics not in the main economic strata (I.e. high income).
Anonymous 8/26/2023 11:24 AM	Property taxes
Anonymous 8/26/2023 11:29 AM	We moved to Superior 20 yrs ago because it was an affordable option for working at a 80-90% of AMI job in Boulder. There's no way we'd be able to buy a house in Superior now. Even middle-class professionals are being priced out. One issue we see is that couples whose children have moved out still live in their big multi-bedroom houses because there haven't been a lot of attractive downsizing options. Thus lots of bedroom space going to waste. Another issue is the mismatch between available housing and available jobs in town:

	the housing is pretty expensive and most jobs are low to moderate paying. It seems like the situation where the people who work in Superior commute in from elsewhere and the people who live in Superior commute out to elsewhere is likely to get worse.
Anonymous 8/26/2023 11:26 AM	Costs are rising so quickly
Anonymous 8/26/2023 11:30 AM	None
Anonymous 8/26/2023 11:35 AM	The community becoming exclusive to wealthy families. We need to become much more diverse across the board.
Anonymous 8/26/2023 11:35 AM	Planning and follow through. Don't just do what feels good. Think carefully and vet out the solution on a 10-20 year scale. Our past attempts are shortsighted and reactionary. Do not repeat this mistake. We have limited land and need careful planning.
Anonymous 8/26/2023 11:37 AM	n/a
Anonymous 8/26/2023 11:41 AM	Too much density
Anonymous 8/26/2023 11:42 AM	Please do not take away our open space land. Access to Outdoor Recreation opportunities are and should stay a priority for this community.
Anonymous 8/26/2023 11:41 AM	Want to make sure we keep investing in infrastructure a d school
Anonymous 8/26/2023 11:43 AM	Price and maintenance
Anonymous 8/26/2023 11:48 AM	The cost of a home in Superior is FAR outside of the normal means for many of its residents. It FAR FAR exceeds what people even making 100k a year can afford. This sis not sustainable and I forsee a lot of beautiful and expensive home sitting vacant while a lot of people are forced to seek housing in communities elsewhere.

Anonymous 8/26/2023 11:49 AM	Superior needs housing that will allow seniors who have lived here to age in our community. This might be multi story buildings with underground parking and elevators. It might also be shared independent housing. This housing wouldn't need to be affordable, but more accessible and community geared. This housing could be multigenerational.
Anonymous 8/26/2023 11:55 AM	Not enough low in one housing and starter homes.
Anonymous 8/26/2023 11:54 AM	Mostly single family, no good transit options to allow car free lofe
Anonymous 8/26/2023 12:11 PM	Stop wasting tax dollars on these stupid surveys.
Anonymous 8/26/2023 12:14 PM	Don’t need low income housing in a high end neighbothood.
Anonymous 8/26/2023 12:19 PM	Stop building
Anonymous 8/26/2023 12:26 PM	No concerns. Superior/Boulder county is just an expensive place to live. Superior seems to be making plans for a lot of retail/office space. I hope they can fill those spaces. More retail and restaurants will make downtown superior much more attractive.
Anonymous 8/26/2023 12:38 PM	Because of our small size and abundance of affordable rental units, I believe we don’t nee: to have an affordable housing program. I believe we’re doing a great job offering options to people. I also think your numbers are misleading. My son and DIL were able to purchase a $500,000 home on a $75,000 salary, and have no problem maintaining the mortgage and the home condition.
Anonymous 8/26/2023 12:38 PM	No concerns at all
Anonymous 8/26/2023 12:41 PM	Need ranches/no stairs as population ages. RMMA is gigantic noise/health/toxins concern. We won’t live here within 1-5 years as a result. I’m angry about this!!! Need space for ADUs for aging pop. Need cohousing options. Not much exists to buy for even those that are at 120% AMI. How many houses exist in Superior for under

	$605k?? Feeling pushed out of the neighborhood due to price and RMMA and I'm at 120% AMI.
Anonymous 8/26/2023 12:41 PM	Taxes increasing
Anonymous 8/26/2023 01:11 PM	No land left to build on
Anonymous 8/26/2023 12:48 PM	Too isolated communities from commercial
Anonymous 8/26/2023 01:09 PM	Land pricing and utility connection costs along with code requirements making homes even more unaffordable.
Anonymous 8/26/2023 01:14 PM	Unaffordability of housing in Superior
Anonymous 8/26/2023 01:17 PM	Younger people and families cannot move into the community - and add to the community - since it is so expensive!
Anonymous 8/26/2023 01:33 PM	We recommend NO more housing developments in Superior it's FULL. Looking at currently overcrowded downtown housing construction our roads can't handle more traffic. We request NO more housing development.
Anonymous 8/26/2023 01:36 PM	Too many apartments and townhomes being built and potentially creating an overly transitory community
Anonymous 8/26/2023 02:02 PM	I'm concerned that Superior is a small town with very little land available for development and that the downtown Superior development seems to be putting in way too much residential relative to commercial (which was not what lured many of the residents into downtown Superior). I'm concerned that there has been talk of converting commercial (former PetSmart and Office Depot) to residential. To maintain the tax base of the town, we need to keep a balance of commercial and residential, not just new residential. FYI, I do not live in downtown Superior.
Anonymous	Do not want to be upside on mortgage. Home prices need to continue

8/26/2023 02:13 PM	to rise, homeowners can build equity in home.
Anonymous 8/26/2023 02:18 PM	None
Anonymous 8/26/2023 02:20 PM	I am most concerned about how the lots will be rebuilt. They should remain true to what they were before the fire. (ie: single family house is rebuilt as single family). I am concerned about denser housing because it will create more people = more cars, more congestion, etc.
Anonymous 8/26/2023 02:26 PM	* Broomfield airport noises lower quality of life and price of houses significantly * Too many build on small lots in new downtown without appropriate investments into infrastructure (new school, wider/better roads, etc.)
Anonymous 8/26/2023 02:30 PM	I am very concerned about the addition of more townhomes, multi-use and low income housing. We need to maintain our existing open space even if that's not the correct term-it's a description. But if more building is necessary, please build larger quality homes with yards and space. We need quality not quantity. The landscape of block buildings and lower - mid income housing is at capacity. Stop building those! Our community, our roads, our town does not need more people jammed in.
Anonymous 8/26/2023 02:31 PM	The houses in rock creek are 25 years old or more. They were poorly made and everything is falling apart after over 20 years of use. We cannot afford to fix/replace everything in our house (absolutely everything needs to be replaced) or move.
Anonymous 8/26/2023 02:30 PM	My concern is that this survey is entirely focused on housing affordability and not maintenance of property value. Homes are also investments.
Anonymous 8/26/2023 02:39 PM	Low and mid income workers have to commute since there is no affordable housing for teachers and the like
Anonymous 8/26/2023 02:48 PM	Superior has primarily been built into a bedroom community accessible to people who have a good income. I can't imagine how a younger family could afford to buy here, and even rentals have become difficult to find and pricy.

Anonymous 8/26/2023 02:45 PM	I'm concerned that outside of Boulder County no one can afford these houses and therefore cannot provide for their families that deserve to live here and have access to all the Boulder County can provide.
Anonymous 8/26/2023 02:59 PM	Increase in cost rebuilding after the Marshall Fire
Anonymous 8/26/2023 03:01 PM	Need more smaller, ranch homes for empty nesters to downsize into.
Anonymous 8/26/2023 03:05 PM	X
Anonymous 8/26/2023 03:15 PM	That the town had the opportunity to do better with the development of downtown and now are trying to correct a problem that may not exist. We have yet to experience the full impact of this development and the other apartment spaces being developed in Broomfield right next door. We're pretty much full with housing but need more commercial space to help the tax base and support jobs in the community.
Anonymous 8/26/2023 03:23 PM	Superior has exploded with housing. We don't need ANY more housing. We already have a traffic problem and adding more housing will only increase the traffic. Stop with the building of more housing.
Anonymous 8/26/2023 03:33 PM	Lack of supply is going to continue to drive prices higher
Anonymous 8/26/2023 03:40 PM	I want Superior to remain a family-friendly, safe community. It's fine with me if Superior's population doesn't grow significantly. If it does grow, I want to make sure streets, parking lots, schools, sheriff's department, etc. are well designed to handle the growth. If we build higher density housing, we should also make convenient & safe public transit available.
Anonymous 8/26/2023 03:52 PM	Don't know
Anonymous 8/26/2023 04:05 PM	Unable to afford to own a home

Anonymous 8/26/2023 04:23 PM	Superior is gradually loosing its original character, status and splendor. It looks it may ne a result of poor urban planning which make the town new developments cheep looking and eclectic. It is becoming slowly an average typical American town which town you can find anywhere. Good example are Superior downtown and Rogers Farms, where chasing the space usage results in a messy and accidental developments. Little attention is given to outdoor and recreational leaving. Originally planned park at Rogers Farms was replaced with chaotic house development. As a long owner house At Rock Creek it is sad and disappointing to watch.
Anonymous 8/26/2023 04:27 PM	Superior needs more doctors offices and grocery stores
Anonymous 8/26/2023 04:27 PM	This is a nice and expensive place to live for a reason. I am already disgusted at all the ugly apartments and tiny homes that are going in. Stop it already. Keep Superior a place for single family homes.
Anonymous 8/26/2023 04:27 PM	None, we don't want to be the next San Francisco or Boulder. Superior is a beautiful place, you need to work hard to live here. I'm an immigrant myself, started at the bottom and was able make it happen and finally afford a house recently in Superior.
Anonymous 8/26/2023 05:17 PM	Cost
Anonymous 8/26/2023 05:37 PM	Too many housing. Needs more unique restaurants.
Anonymous 8/26/2023 05:43 PM	There is already too many people cars and houses here. There is no need for any more
Anonymous 8/26/2023 05:53 PM	That it isn't affordable whatsoever. When we moved there we believed it was going to be our forever homes. After the Marshall fire our hopes were lost- 1. We lost our rental 2. No homes were affordable whatsoever. It actually is quite depressing to think about
Anonymous 8/26/2023 06:03 PM	Income rates not keep up with the rise of housing costs.
Anonymous	None; Affordable housing not needed whatsoever

8/26/2023 06:19 PM	
Anonymous 8/26/2023 06:40 PM	Destruction of long standing communities by fabricating needs of a small group of people
Anonymous 8/26/2023 06:43 PM	Uncontrolled multiple unit apartment. Buildings is a concern.
Anonymous 8/26/2023 07:14 PM	People who work in Superior cannot afford to live here and commute long distances to work
Anonymous 8/26/2023 07:18 PM	That it continues to escalate in price, given our proximity to the absurdly expensive housing in Boulder. That Superior doesn't take steps to make new housing more dense to improve transit solutions both for climate reasons and traffic reasons.
Anonymous 8/26/2023 07:21 PM	None
Anonymous 8/26/2023 07:35 PM	The cost of homes keeps going up at such a high rate that I worry families will no longer be able to move in and others will be forced out. Our schools are seeing large decreases in enrollment and I think housing is one reason.
Anonymous 8/26/2023 07:41 PM	I worry about young families being priced out of buying or renting homes here and I worry about empty nesters moving away from their communities because their aren't smaller, more mobility friendly places for them to live here.
Anonymous 8/26/2023 07:41 PM	Prices are going to keep going up
Anonymous 8/26/2023 08:22 PM	Rent is astronomical and maintenance at Bell Flatirons has continued to deteriorate. They need competition and we need more options, especially with some yard space.
Anonymous 8/27/2023 07:34 AM	n/a
Anonymous	Too many condos/townhomes

8/27/2023 07:51 AM

Anonymous
8/27/2023 08:15 AM

Affordability will be based on market demand. Given the current trajectory, affordability in superior will not be a problem.

Anonymous
8/27/2023 09:15 AM

Overcrowding and traffic issues due to the large number of apartments existing and being built in the area with limited infrastructure to support all the extra vehicles.

Anonymous
8/27/2023 09:18 AM

Rising rents are pricing me out of Superior after living here 25 years. I'm finally at the point where I can buy a home but home prices for even multi-family homes are now unaffordable. I desperately want to stay in Superior. It is home. I hope affordable units and homes are built for SINGLE people in my income bracket

Anonymous
8/27/2023 11:11 AM

Too many homes already. I'd like to see the town focus more on preserving and maintaining open space, replacing all the dying ash trees and enforcing homeowners to do the same, dealing with airport noise, and Highway noise. Also focusing on residents who use neighborhood streets has a storage place for their unsightly vehicles that are leaking oil.

Anonymous
8/27/2023 11:44 AM

I am concerned about the City bringing down our housing values by putting in too much low income housing. We are a very small community and very close to Boulder, who is more equipped to provide such housing.

Anonymous
8/27/2023 12:15 PM

If we don't figure out the our fencing/landscaping issues and airport issue, we are either going to all go up in flames or have to move because the airplane noise is too loud or we'll have lead poisoning.

Anonymous
8/27/2023 01:41 PM

We need more affordable housing located near shopping and transportation that is not right on Hwy 36 to avoid gas fumes/pollution for these families.

Anonymous
8/27/2023 02:00 PM

No concerns in Superior. Affordable housing should be prioritized in the City of Boulder and unincorporated Boulder County.

Anonymous
8/27/2023 02:11 PM

Too little too late. Time to do affordability was during downtown development. Don’t take from the rest of us to account for the failing

in the past. DO NOT create “slums” in the name of affordable housing

Anonymous
8/27/2023 02:18 PM

Every bit of open space doesn't need to be filled with townhomes, tiny homes, apartments, condos, etc... The city already starting to look like an urban metropolis!! Not all that appealing going downtown any longer. I understand the city is trying to make to area more appealing for people to move to the area, but soon all it will only be crawling with structures and over crowded.

Anonymous
8/27/2023 06:35 PM

With Superior's proximity to the mountains and nice planned community layout, prices will remain high here if there is a free market for housing. The small amount of land in Superior is already completely jam-packed with housing. I would like to see no additional housing built after Downtown Superior is completed. Downtown Superior already came with many multi-family buildings and apartments. I would prefer the Town stop putting time and money into this useless research and re-pave Rock Creek Parkway.

Anonymous
8/27/2023 06:50 PM

Schools will shrink as fewer families can afford homes near them

Anonymous
8/27/2023 07:56 PM

The MOST pressing concern involving housing in Superior is the airport noise and expansion problem, which should be the Town's #1, #2, and #3 priority. PLEASE SOLVE THIS PROBLEM. Unless and until the Town solves this problem, any discussion regarding housing is irrelevant because nobody will want to live here. With that said, if that issue is addressed, our Town needs to find a way to provide more housing options for seniors, such as a cooperative living development subsidized by HUD. This is why I selected the lowest income group in question #4; seniors live on fixed incomes (many of them solely on Social Security), so please do not otherwise misinterpret my answer to #4. Instead of having empty commercial properties, the Town should consider building affordable senior living options. Please do not build on any remaining open space because Superior is already overbuilt!

Anonymous
8/27/2023 08:19 PM

Boulder County has become unaffordable for most due to housing costs.

Anonymous
8/27/2023 09:47 PM

My concern is that our woke progress Mayor and Town Council will gut the reason why people choose to live in Superior in the first place...We want our space. Superior is NOT responsible for picking up the shambles that the Boulder County Housing Commission has

created. Go sell that crap someplace else!

Anonymous
8/28/2023 06:05 AM

I'm concerned if the law changes in CO to allow allow rent control and Superior adopts rent control that it will have the opposite affect and increase rents by lowering the supply of rentals as landlords look elsewhere to purchase investment properties. To maintain low rents we need to be a landlord friendly city or it will hurt the low income community when it comes to rental options and rental rates.

Anonymous
8/28/2023 07:37 AM

First concern is car-centric density where you have apartment buildings with massive surface level parking lots. I support density, but I really support well-designed density (walkable streets, mixed use, parking garages wrapped with livable space). Second concern is adding density without the community amenities that the additional density requires (parks, recreation centers, pools, grocery stores, wide sidewalks, bike paths, etc).

Anonymous
8/28/2023 09:00 AM

Please do not continue to build here. More housing brings in more crowding, traffic and crime. If people can't afford to live in Superior, there are surrounding towns and cities. You've already added hundreds of homes in downtown Superior. Stop the growth!!!

Anonymous
8/28/2023 09:27 AM

I don't really have concerns. Large, single family is available in Rock Creek. Small and moderate single family are available in Original town and Sagamore. Multi-family of all sizes and denser layouts are available in Downtown Superior. I actually think we already have a good mix. The one thing mostly missing is probably a more affordable option for seniors who would want a single-story (ranch or patio home) type of layout....we do have this in Coal Creek Crossing and Lanterns, but they're over $1M. I think the addition of the wee cottages are actually a terrific option for people who want to be at a lower price point than the typical Superior home. I think some tasteful, small scale multi family (like what you would see in the Shanahan Ridge and Devil's Thumb areas of South Boulder) would be a nice addition as well. We do NOT need to try to turn ourselves into Arista and offer large-scale multi-family....if someone wants that product, there is plenty of it in towns very close to Superior.

Anonymous
8/28/2023 10:20 AM

Seeing that post Marshall Fire that 26 lots have sold in Original Town, and massive homes are being build on the newly aquired lots, Original town will be one of the lest affordable places to live. Prefire OT was one of the most affordable and unique places to live in Superior.

Anonymous 8/28/2023 10:23 AM	Rapidly rising house prices
Anonymous 8/28/2023 10:52 AM	We don't need more housing in Superior. There is plenty of housing in the Denver metro. Keep Superior small and safe. Stop drawing in more people; this only creates more crowding, more traffic, more crime.
Anonymous 8/28/2023 11:53 AM	Nothing that has been done really satisfies some basic needs to get people out of their current homes and into other homes in the community. New development has failed to provide even tiny yards for people to have at least a little personal space to garden or for pets - one of the the major reason retirees are staying in their too large houses in our area. (Outside of it being a decent space with a better price tag than they sell for). So, we are screwed beause now all of this development has happened without taking into consideration what is really needed and wanted - so this is far too little too late. Also with the fire rebuilds, that took away any opportunity to make changes because they overbuilt what they wanted to build, not what the communty needs.
Anonymous 8/28/2023 12:39 PM	We bought a home in Rock Creek several years ago with the hope that the demographic of our community would be very family friendly. We do have concerns with housing for a younger demographic that makes the community less safe because those who are younger are less aware of children walking/biking/etc. We want our kids to be able to leave our house, especially on the way to school, by bike or scooter and know that people are, for the most part, looking out. In our time here, with the development of smaller homes and townhouses geared to the younger and older demographic, we've noticed more speeding and less awareness on the roads.
Anonymous 8/28/2023 04:55 PM	That it will be too expensive for the average homeowner
Anonymous 8/28/2023 07:30 PM	Superior does not need more housing.
Anonymous 8/29/2023 05:25 AM	We have an aging population that should be accommodated affordable

Anonymous 8/29/2023 09:05 AM	Keep the community small and safe...this is a special place to live...do not lower our quality of life.
Anonymous 8/29/2023 09:28 AM	Cost is the main concern
Anonymous 8/30/2023 07:07 AM	Too many NIMBY's blocking reasonable development and much-needed affordable housing
Anonymous 8/30/2023 09:26 AM	We already have sufficient housing in Superior as the housing demand will likely decrease due to the airport noise.
Anonymous 8/30/2023 02:25 PM	No affordable housing
Anonymous 8/31/2023 10:28 AM	i do not think we need large scale "dense" projects - the downtown superior area is highly dense and is not in line with the original feel of the town. In fact, i think it takes away from the beauty of the town.
Anonymous 8/31/2023 11:59 AM	Main concern is Superior infusing to many housing units throughout the town which takes away the ambiance that Superior has been for decades into a crowded condensed town.
Anonymous 8/31/2023 08:56 PM	I want to be able to downsize to 3 bedrooms, most critically having the Primary room on the main floor. The other rooms may be in a walkout basement. We need more ranch homes, especially for the aging population.
Anonymous 9/01/2023 07:19 AM	Don't have any concerns, please don't build more and pave paradise with parking lots
Anonymous 9/01/2023 08:06 AM	Not enough affordable housing available
Anonymous 9/01/2023 10:17 AM	I want my children to be able to afford to live here and raise families here.
Anonymous 9/01/2023 03:12 PM	My rent had increased $400 since I moved to Superior Nov. 2021. I love living here and am involved in the community but the escalation

	in housing price is outrageous and difficult to absorb as a single-income resident.
Anonymous 9/01/2023 03:38 PM	Young families are priced out of Superior. The community is aging rapidly. There are limited housing options for empty-nesters ready to downsize and make houses available for young families. This has a negative impact on school and the community overall. Most of the young adults that grew up in Superior cannot afford to live here now.
Anonymous 9/01/2023 03:54 PM	I am concerned about not having enough schools for all the people moving into Superior over the next 10 years.
Anonymous 9/01/2023 03:54 PM	I am concerned about over-density.
Anonymous 9/01/2023 10:06 PM	I wonder how elderly in Superior can keep up with rising costs on fixed incomes / pensions. I bike in tye mornings, and have noticed two elderly men (75-80), one with a big white dog, who may possibly be living outside near Miner's park. There have been pockets of homeless people living in this area this summer just on the Broomfield side of the bike path, just past the sunflower walkway leading to the Miner's park underpass. Also near Grand Rabbits and Men's Warehouse, near the underpass. I am concerned about the unhoused living near our community, especially as we head into Winter. I wish we had a community with affordable housing, maintained and monitored, that included a job requirement for those of workforce age and capability and upskilling opportunities.
Anonymous 9/02/2023 01:49 PM	It's impossible to OWN here in Superior now unless you purchased something 7-10 years ago. It is very sad, as we moved here 2 years ago and there are literally NO affordable housing options for me, a single mom.
Anonymous 9/03/2023 07:34 AM	It doesn't lower housing values
Anonymous 9/03/2023 08:23 AM	Housing involves energy and water use. Planning for low carbon footprint homes and low water use homes (including less lawns) is non-negotiable.
Anonymous	Too many apartments, condos, townhomes, etc. being built and no

9/03/2023 01:27 PM	actual houses! Superior is suppose to be a family-centered community, but without houses and neighborhoods, we are moving away from that. (I grew up in the TOWN of Superior, but wouldn't want to raise my future family in Superior because it's pushing to become a city)
Anonymous 9/04/2023 08:28 PM	I don't think my kids will be able to purchase a home in Superior after they graduate from college.
Anonymous 9/06/2023 06:54 AM	Families can't afford to live here and our schools will die and decrease the vibrancy of the community
Anonymous 9/07/2023 01:26 PM	As an employer in the area, our staff cannot afford housing anywhere near here. We often lose staff because the commute becomes too much, especially in the winter. We provide a service to about 100 families in the Louisville/Superior area and we have high turnover in part due to the high cost of housing. We also have young women who stay in abusive relationships because they cannot afford housing by themselves. We have continually raised wages, but that means we have to also raise the cost of the childcare services we provide to the community.
Anonymous 9/07/2023 01:43 PM	I'd like to see housing that teachers, health care workers, police and fireman can afford so as to diversify our community.
Anonymous 9/07/2023 03:30 PM	Everything is 1/2 million and up!!!!!!
Anonymous 9/07/2023 04:41 PM	As I age, I can't afford to downsize and still live here. I'd love to see some 1 story 1-2 bedroom homes.
Anonymous 9/07/2023 07:34 PM	High property taxes drive housing cost affordabilty. Area's should work on lowering property taxes not just keep raising them.
Anonymous 9/08/2023 03:37 AM	My biggest concern having anything to do with the cost of housing in Superior is the concern of airplanes endlessly overhead impacting health, safety, and quality of life will begin (or by this point continue) pushing down our property values; wiping out hard earned and deserved equity. This is of utmost concern that has me looking at possible options to leave Superior if I decide it's time to get out.

Anonymous 9/08/2023 03:21 PM	our nice bedroom community of owners being flooded with rentals, condos, townhouses, low income housing, stack and pack housing, too much high density housing
Anonymous 9/08/2023 03:48 PM	That cheap looking subsidized housing will be built on previously undeveloped natural land and will hold the occupants hostage from the American Dream, never allowing them to accrue equity
Anonymous 9/09/2023 03:25 PM	The entire region is getting increasingly expensive. Superior has been more proactive than many communities in the area in allowing new housing, but it needs to continue to do its part in the interest of making homes affordable and accessible to a broader set of socioeconomic groups.
Anonymous 9/11/2023 01:32 PM	Supply and demand. Very few spots allow new housing. Board should allow more housing.
Anonymous 9/11/2023 08:41 PM	I worry about there not being affordability for young adults and families. I also worry that the dominance of 3-4 story townhomes and large single-family homes leaves out appropriate housing for independent senior citizens, while the lack of assisted living and senior living options prevents multiple generation to live in close proximity.
Anonymous 9/11/2023 09:57 PM	Superior literally has no single level housing available for seniors that is affordable.
Anonymous 9/15/2023 06:59 PM	All housing is high Superior is no different than elsewhere
Anonymous 9/26/2023 03:46 PM	Boulder County housing will be unaffordable for most.
Anonymous 9/26/2023 04:02 PM	ADU's and alternative housing need to be spread all over Superior, nit just in the Northwest corner.
Anonymous 9/27/2023 07:49 PM	We are losing class diversity in Superior due to high housing costs on single family homes and need to keep diversifying type of housing stock beyond just single family homes.

Anonymous 9/30/2023 05:52 AM	Just build mixed use housing and apartments, and accessory dwelling units.
Anonymous 10/02/2023 01:24 PM	My landlord raised my rent 10% . I will no longer be living here in the next year because of the increase in rent.
Anonymous 10/02/2023 01:09 PM	Hopefully will have moved to a more affordable place in 10 years!
Anonymous 10/02/2023 01:16 PM	No one working lower end jobs such as cashiers, house cleaners, and other general jobs can live here. There should be serious consideration given to accommodating these people. But if the airport continues it mad growth property values will tumble and the whole town will be more affordable.
Anonymous 10/02/2023 01:15 PM	That prices are going up and the need for multifamily housing is needed.
Anonymous 10/02/2023 01:16 PM	n/a
Anonymous 10/02/2023 01:40 PM	Personally I don't want affordable housing in Superior. It's often high density, which is an eyesore and can bring more crime.
Anonymous 10/02/2023 02:03 PM	It would be nice if service industry personnel - retail workers, food service, caregivers, health care workers, etc. could afford to live here. Also if the price of housing keeps going up, the property taxes will wind up forcing a lot of folks to move as they retire, which would hurt our community's continuity
Anonymous 10/02/2023 02:17 PM	I am concerned we will build too much. I like my small community and moved here for a reason. I don't want to see it become like every area east of 25 and have every single acre of space developed.
Anonymous 10/02/2023 04:00 PM	Superior is not meant to solve the housing crisis. It is sustainable as is but not more.
Anonymous	Please leave our town alone, it's great as it is and we were never

10/02/2023 04:01 PM	designed for accommodating a large population.
Anonymous 10/03/2023 12:06 AM	I'm most concerned about the infrastructure to support more residents - schools and public transportation in particular. More affordable housing draws residents with lower incomes who may be more reliant on public transportation. Schools are already understaffed and underfunded - who is going to teach all the new students?
Anonymous 10/03/2023 04:32 PM	Depending on interest rates, housing will continue to rise. I hope that superior maintains a good mix of housing and not all apartments.
Anonymous 10/03/2023 04:47 PM	Lower property taxes.
Anonymous 10/05/2023 09:05 AM	We need to find ways to increase housing supply and provide affordable housing so we can be an inclusive community.
Anonymous 10/05/2023 11:00 AM	If the downtown area had been built as it was originally proposed we wouldn't have some of the shortages in types of housing that we do. Downtown looks nothing like the original artist's rendering that was presented to us. The pricing will just continue to rise and there is nothing we can do about it. Forget affordable housing.
Anonymous 10/06/2023 11:21 AM	Given the average single family home price in superior is $800k, this is fiercely inaccessible to much of the population. I worry that as people purchase houses at these inflated prices, when they sell they will want to turn a profit, which will be at a rate that in unattainable by most. This will just perpetuate the "only the wealthy can live here" issues.
Anonymous 10/09/2023 09:37 PM	Rising tax rates.
Anonymous 10/17/2023 11:56 AM	My only concern is Superior attempting to do what may be considered "morally correct" and ultimately bring down the overall quality of the community, rather than maintain the currently high standard of living in the Town.

Mandatory Question (247 response(s))
Question type: Essay Question

Q7 What is your hope or vision for housing and housing affordability specifically in Superior looking forward to the next 10+ years?

chezgeoffroi 8/12/2023 03:38 PM	I hope to see a mix of permanently affordable homes to own, subsidized rental units, as well as attainable middle income housing built in Superior. All housing needs to be in close proximity to public transportation and amenities.
Jan krick 8/14/2023 07:42 PM	To build up rather than out.
jasonabair 8/21/2023 07:12 AM	The housing discussion is irrelevant unless and until the Town of Superior addresses the most pressing issue facing the town of Superior: Rocky Mountain Metropolitan Airport noise and lead pollution.
MattHorton 8/21/2023 07:17 AM	Jobs in Superior pay enough for people to afford to live in Superior. Why are we subsidising businesses to pay lower wages?
ddsuperior2022 8/21/2023 07:21 AM	I would hope it would be more affordable.
Jason 8/21/2023 07:23 AM	I'd like to see Superior become a leader in affordable housing. Let's set goals to make us the leader in equity and affordability and get to work.
John Bahr 8/21/2023 07:32 AM	I hope that Superior continues to make good choices.
welcht85 8/21/2023 07:34 AM	There would be a variety of housing options available which would lend itself to a move divers community
Zelda 8/21/2023 07:37 AM	That it is well thought out, that disabled superior residents get a shot at getting an apartment in the town that they have grown up in.
Paidipati 8/21/2023 07:50 AM	X

ncmalchow 8/21/2023 07:53 AM	Reasonable tax assessments, a cooling of new builds (Marshall Fire-affected homes excepted).
myounce7673 8/21/2023 07:58 AM	That Superior doesn't become just another commuter town filled to the brim with apartments and zero character.
jwehman 8/21/2023 08:07 AM	My only hope is that I can sell my house and get out, so that Superior and go and do whatever Superior is going to do. Nice "downtown", by the way. What a joke.
8377 8/21/2023 08:12 AM	Attainable home costs where we can allow 20-40 year old professionals working in our community and living in our town.
Rick H 8/21/2023 08:14 AM	Stop building!!!! We don't have the space. It is already too congested. NO MORE HIGH DENSITY HOUSING!
Abernathy 8/21/2023 08:20 AM	That boat has sailed. Development over the past three decades provided a decent mix of housing types in Superior, and now it is what it is. Let's make the town as pleasant as we can from here, with attention to taxes, traffic, maintenance, schools, parks, services, and other activities of daily living. Please don't convert commercial to residential of any kind.
MSR 8/21/2023 08:17 AM	My hope is that we will continue to be a small town with only the Downtown Superior urbanized. We can enjoy the open space without excessive crowding, that the animals aren't crowded out due to overbuilding of unnecessary apartments, like the ones that line 36. My hope is that you will stop harrassing our town and leave us be.
Foo Bar 8/21/2023 08:22 AM	My hope is common sense will prevail and people will realize that building cramped housing in the name of affordability is not right for Superior.
Brayr 8/21/2023 08:30 AM	Having more options and diversity. Being further away from the airport
jrstanton 8/21/2023 08:40 AM	I think Superior needs housing to support single adult households or couples without children, and service industry workers, teachers , etc who work in the area but can't afford to live here. Although, Superior was initially developed as a great place for families and child raising.

	We have limited real estate and might not be able to meet all needs out there while maintaining the character of Superior.
Amanda Vaughan 8/21/2023 08:40 AM	That the town will build up more affordable housing so that we can attract good teachers, etc.
clwclw 8/21/2023 08:41 AM	homes with more land
KB 8/21/2023 08:51 AM	Small and large condos in quiet area, available for purchase, in price range that works for seniors.
leacach1 8/21/2023 08:47 AM	See above.
aeroncaben 8/21/2023 08:52 AM	Resist the urge to allow giant apartment complexes in the name of affordability. Superior should still do its part, but through smaller scale town home product spread throughout the town. Not everything needs to be a "luxury" townhome.
RH 8/21/2023 08:56 AM	Superior is a place for families. I would love to raise my family here, but I can barely afford to keep myself here, let alone adding additional members. In the future, I would love to see young families able to make this great place their home.
zaid_haddad@hotmail.com 8/21/2023 09:16 AM	That Superior housing prices increase at the same rate as the rest of Boulder County.
tagar 8/21/2023 09:22 AM	We are close to Broomfield and Westminster that already have affordable housing. Superior doesn't have a lot of developable land, so it should not be focus for the Town
Sally Lewis 8/21/2023 12:23 PM	Stop adding lower quality cheaper housing of any kind. We used to be a high quality community. Been here 30 years.
jeff roberts 8/21/2023 09:31 AM	Just because people want to live in Superior doesn't mean the rest of the town needs to sacrifice their quality of living. There is a lot of space in undeveloped areas of Colorado (which Superior once was) where communities can start and grow. Those new areas will

	naturally be more affordable and be a much better long term solution for housing in Colorado.
CarolN 8/21/2023 09:52 AM	make good use of abandoned large-package buildings
The only thing 8/21/2023 09:48 AM	Allow current homeowners the ability to add ADU's where possible. Allow existing homeowners to offer flexible rental terms not dictated by an HOA. I'm not super concerned about affordability as the airport will degrade our property values and Superior will be affordable for anyone who can overlook the constant noise and lead poisoning.
drexelbrookian 8/21/2023 09:58 AM	we need to have less houses
drexelbrookian 8/21/2023 10:01 AM	Stop building and make the town better. Work on making the town safer for fires. Get rid of wooden fencing, etc. instead of concentrating on something that is not going to change.
bryanpeck3 8/21/2023 10:07 AM	Keep the same number of houses
Mary 8/21/2023 10:10 AM	Please see above answer.
jbutt 8/21/2023 10:15 AM	In our view, Superior's identity is a family-focused community with easy access to Boulder and Denver. We'd like to ensure this identity persists into the future. I think we all need to acknowledge that housing affordability is a regional issue (Boulder county, Denver metro area) and cannot be addressed by our community alone.
The_don 8/21/2023 10:24 AM	Would like to see more options for lower income families in Superior.
stsamuel 8/21/2023 10:26 AM	No more high-density housing. Need to preserve open space and restrict height of buildings.
Karen Zeid 8/21/2023 11:02 AM	They need community where resources can be merged, where living is efficient. Co-housing/community, near basic needs: work, food, social opportunities Senior living amenities for those with challenges with daily living skills (homeless, Special need population, low

	income, refugees, seniors, you and me)
WhatsSup 8/21/2023 11:12 AM	Superior should remain focused on providing a premium housing market in Boulder county.
Janice Janus 8/21/2023 11:43 AM	A variety of options and availability
Brian 8/21/2023 12:00 PM	Need to maintain single-family housing for families.
No 8/21/2023 12:06 PM	That large scale dense development and redevelopment (particularly of the vast parking lots between Marshall Rd and US36 west of McCaslin). Deregulation, in particular abandonment of the idea that restricting housing ("affordable housing requirements") does anything but reduce the overall supply, when lack of supply is quite evidently the problem. And perhaps a law defining appeals to "character of the neighborhood" as a de jure concession of defeat with prejudice by the invoking party, a sort of Godwin's Law for NIMBYism.
Superior 8/21/2023 12:25 PM	Stop building the ugly and congested townhomes complexes. Instead, create more open space and keep the commercial businesses in the Target-Costco-PetSmart shopping areas happy and profitable.
gmail@gmail.com 8/21/2023 12:26 PM	no more housing- it's too crowded- let's focus on filling the vacant retail space with quality establishments
AW 8/21/2023 01:01 PM	That people who work in this community can actually afford to live here.
AFlinn2Lee 8/21/2023 02:08 PM	A town where those who work there, can live there
Juji 8/21/2023 02:37 PM	Keep it a small family-oriented community that feels safe.
jack 8/21/2023 03:48 PM	My hope is that when the projects that are currently under development are completed that Superior will abandon any plans for any further development, and focus on improving the quality of life for

	the residents who are already here. Repair and maintenance of the existing infrastructure should be the Town's main focus thereafter.
None 8/21/2023 04:33 PM	I would like to see housing developed for downsizing seniors but hold out very little hope as nothing has been done in the 15 years I've lived here, even though it is brought up regularly. Also, like the Board of Trustees should provide information to residents of the impact that new developments will have on resources especially water, wastewater treatment and natural disaster evacuation. The time to evacuate during the Marshall fire highlighted the lack of options to get out of town and that was before completion of construction in "Downtown" Superior and the new Boulder Creek development on McCaslin.
Kristin 8/21/2023 06:09 PM	Rent doesn't continue to increase.
Duchess 8/21/2023 07:29 PM	It will incorporate families of all budgets & you're not relegated to run down apts bcus the 2000 sq ft homes & above are a million dollars, causing families to leave the area where their kids have attended elementary just for the sake of ownership! Kids want to develop roots in their community & when parents are in a position to purchase, we have to look 30 min outside of the county to find space that's affordable when we work in superior & Boulder. This causing kids to leave friends behind & parents commutes increase also equally less time home with the kids. Doesn't seem right that we can live in the towns we work in.
mondrowe 8/21/2023 08:32 PM	"Housing Affordability" is a ephamisim for subsidized housing, or cheap , high density housing. The fact is that there is a housing market and the home owners of Superior need our home values to stay high in comparison to the region. Our home is our greatest investment asset. Any intervention you make to to add cheaper will only lline the pockets of the builders and realtors and will hurt the current home owners whose interests then Twon Board is intended to serve. Requiring three answers to Question number 1 is a dostortion. It presumes we need more housing. There is no option to say that we do not.
Nova 8/21/2023 09:08 PM	I like the large single family homes in Superior...it is, in some sense, what defines us. We are a bedroom community. However, so long as we make our regulations with an attitude of "protecting our home values" then...we will be successful at that, and home prices will stay high. There's a lot of NIMBY, which I understand...I don't want my

	neighbor turning his house into a quad-plex. Not sure I want some giant condo building at the McCaslin RTD. But if we actually want Superior to be more affordable, the fact is that we need more homes, and we need to stop being protectionist of property values.
bingslanding 8/21/2023 09:33 PM	That we don't build anything more, keep the land in a natural state
More commercial less residential 8/21/2023 09:39 PM	Our hope is that there is no more residential development in Superior at all and that the existing commercial spaces are used to bring in companies that contribute positively to the tax base. Superior has already become more crowded with the addition of Downtown Superior and Roger's farm. We moved here to enjoy the suburbs, not a more densely packed city with lots of apartments. We paid our dues to move into this town and people will always complain there's not enough affordable housing, but the whole reason that prices are high is that this area is in high demand. Are the people asking for affordable housing in Superior actually working in this town and is it too difficult to commute 10-20 minutes from Broomfield if not? If this is actually about needing affordable housing in Superior so people can work in Boulder, then perhaps that is Boulder's issue and not Superior's. Let the natural laws of supply and demand play out and higher prices will push people into lower cost areas of the country just as Californians have fled to Arizona, Texas, and Colorado. We are not interested in diminishing the quality of our life in Superior to accommodate an even more densely packed town.
ETGL 8/21/2023 10:15 PM	That Superior becomes a much better town, retaining its small town image from its earlier existent. Mid to high income housing
Chenn6keri 8/22/2023 04:28 AM	That we will create housing opportunities for home ownership & rentals for people at every income level & welcome this diversity to our town. If buying a home is how wealth is built then everyone needs to be given that opportunity. Right now as we rebuild we have an opportunity to buy empty lots & turn them into attainable homes.
lkvasnicka 8/22/2023 04:41 AM	Cost of housing needs to decrease. It has risen too high and too fast.
SuperiorJane 8/22/2023 07:05 AM	Innovative housing options for many income levels

Tricia 8/22/2023 07:16 AM	Senior living
rterpstra 8/22/2023 09:40 AM	More ranch-style comes (single floor with optional basement)
juliaann11 8/22/2023 09:47 AM	I hope Superior will find a way to offer housing options to increase diversity in our town and allow all members of our community including teachers, etc. to live near where they work. I would also love to see creative housing options that help build community among residents.
MisterSelby 8/22/2023 11:00 AM	There is great opportunity to complement the existing neighborhood with developments of low density, townhomes/cottage courts concepts suitable for seniors (to downsize to or be able to live near their own kids raising kids) and for young families to buy. My fear is it will become more 3+ story townhomes or apartment buildings, developments with cost shifting to be "affordable", resulting in inadequate water supply, inadequate water treatment, traffic flow problems, with worse roads.
Superior resident 8/22/2023 12:56 PM	There will be NO need for housing in Superior if the town of Superior does not address the current unbearable situation with the airport noise.
CM 8/22/2023 08:34 PM	Housing Affordability is a euphemism for subsidized housing, or cheap, high density housing. There is a housing market and the home owners of Superior need their home values to stay high in comparison to the region. Our home is our greatest investment asset. Any intervention you make to to add cheaper housing will line the pockets of the builders and realtors and will hurt the current home owners. Requiring three answers to Question number 1 is a distortion. It presumes we need more housing. There is no option to say that we do not need any housing. Therefore, this survey is not legitimate or honest.
asdf 8/22/2023 09:11 PM	same as above
Anonymous 8/23/2023 07:53 AM	We cannot rely on the larger economy to take care of the issues here. I hope we can obtain grants and funding to support the critical affordability crisis and keep the community thriving and attractive to businesses and middle-/working-class families.

Kathrynsg 8/23/2023 08:41 AM	More homes! Affordable! Dense! Mixed use!
nevermind 8/23/2023 09:19 AM	reintroduce single family homes and slow down residential development; halt apartments.
SEEDS 8/23/2023 09:55 AM	1. Town of Superior Board supporting rezoning undeveloped vacant land that can offer the greatest level of attainable and affordable housing. 2. Town of Superior Board making commitments toward innovative transit oriented development that addresses the shortage of affordable housing but also addressing how best to reduce carbon emissions, achieve ACES Sustainable Plan objectives, be more proactive in addressing climate change related events such as the Marshall Fire, Sonoma California Fire, Lahaina Maui. 3. Town of Superior Board collaborate with private non-profits, private developers showing leadership to address the shortage of attainable/affordable housing. 4. Town of Superior Board support efforts of private sector developers offering to develop attainable/affordable and mixed use housing by sponsoring collaborative grant applications to secure funds used to develop housing. 5. Town of Superior Board BE BOLD in addressing the attainable/affordable housing crisis in Superior and do not compromise on the economic/environmental value that attainable/affordable workforce and senior housing brings to a community. 6. Town of Superior Board be receptive to innovative building techniques such as modular assembly used in developing mixed use, medium density housing and transit oriented development near bus rapid transit centers, RTD bus routes. 7. Town of Superior Board take advantage of opportunities to support housing that offers to be both attainable/affordable but also highly energy efficient by adopting aggressive policies that expedite the delivery of attainable/affordable housing by proven methods used by other municipalities across the state of Colorado. 8. Examples of actionable goals immediately needed by the Town of Superior to support attainable/affordable housing include: Expedited zoning/plan review/approval process, Water/Sewer tap fee reductions, Permit Fee waivers, General Fund subsidies toward driving down extremely high land costs, Land Banking partnerships, Sponsorship of public/private grant opportunities through the state of Colorado (DOLA), Colorado Division of Housing, Colorado Housing Finance Authority, Housing & Urban Development, Letters of Support for grants that are pursuing funds to be used in innovative community development under the Department of Energy, Economic Development Administration, National Science Foundation, Boulder County Community Foundation Marshall Fire Fund, Boulder County ARRA

	Funds, Boulder County Covid Funds, Boulder County General Fund. 9. Town of Superior Board support Innovative developers that are attempting to address economic development, climate change, housing shortages, alternative to traditional transportation (electric vehicles/car sharing, electric golf carts for seniors), reduced parking requirements for walkable infill developments. 10. Town of Superior Board support innovative developers seeking to implement solar arrays integrated within site plans, architecture, and other accessory structures where solar panels can serve duel purposes. 11. Town of Superior Board support innovative developers seeking to implement cost savings measures where distributed energy systems that include ground source heat pumps, performance architecture, onsite energy storage and collaboration to other solar initiatives at scale that can reduce carbon footprints for attainable/affordable housing. 12. Town of Superior Board manages NIMBY through informed decision making based on factual data, balances concerns about traffic impacts to local neighborhoods with the need for attainable/affordable housing, balances opposition to increased building heights, units per acre, increased lot coverage ratios, floor area ratios or visionary architecture that deviates from the status quo as necessary to maintain a balanced community that includes attainable/affordable workforce, senior and mixed income housing. 13. Town of Superior Board continue to "lead by example" by supporting opportunities to collaborate in demonstrations in innovation.
Bob McLaren 8/23/2023 01:14 PM	A better blend of residential and commercial properties.
Britdj 8/23/2023 07:26 PM	That home prices moderate and I'll be able to keep my family here.
vaucm 8/24/2023 09:47 AM	If Superior decides to build affordable housing, please ensure it fits our town's character (height, size, and architectural look).
Anonymous 8/24/2023 03:09 PM	My hope is for a diverse community that has something for everyone.
Anonymous 8/25/2023 01:15 AM	JeffCo airport doesn't loop it's planes over Superior
Anonymous 8/25/2023 07:02 AM	I would love to see Superior as a diverse community. Boulder County is basically priced out of reach for many of us who work in Boulder. And Superior seems to be fully focused on bringing in the highest pricing builders - Remington, Boulder Creek Homes, etc. I'd love to

	upgrade from a multi-unit dwelling to a single-family but as a single mom, I'm completely priced out.
Anonymous 8/25/2023 05:31 PM	I hope values only go up. I don't feel we need affordable housing here - nearby surrounding communities have plenty of options. We do not need to be a be-all-end-all.. Stop over-legislating and let the market decide!
Anonymous 8/25/2023 08:34 PM	stop going woke
Anonymous 8/25/2023 10:03 PM	If I ever left Superior (I've been a resident close to 30yrs.) I would want to move back here in a heartbeat. But, if it happened today I would not be able to afford to move back into Superior.
Anonymous 8/26/2023 07:13 AM	I would like to see hardworking families have the opportunity to provide a safe affordable home for their families
Anonymous 8/26/2023 11:12 AM	I'm hoping affordable housing will be available once again in Superior.
Anonymous 8/26/2023 11:12 AM	For single income families to be able to afford to live here.
Anonymous 8/26/2023 11:18 AM	More housing options for a diverse demographic with families.
Anonymous 8/26/2023 11:19 AM	Hopefully there will primarily be single family homes
Anonymous 8/26/2023 11:20 AM	One story townhomes or apartments.
Anonymous 8/26/2023 11:22 AM	.
Anonymous 8/26/2023 11:23 AM	Walkable communities, mixed use and bike friendly.
Anonymous	Single family household dominate

8/26/2023 11:23 AM

Anonymous
8/26/2023 11:25 AM

A housing ecology is created that allows people to begin modestly and work their way up a housing ladder to the level they feel comfortable with, all while providing community services which obviate VMT. Energy independence for Superior is another goal to keep in mind: it would be beneficial to have energy efficiency reflected in land values, taxes, and mortgage rates (energy independence means lower risk to lenders).

Anonymous
8/26/2023 11:23 AM

We should allow an inflow of a diverse mixture of demographics. I.e. I am in support of AirBnB and other short term living solutions. The fire has taught us thus much. If short term leases or short term rentals are prohibited the Town will lose its welcoming atmosphere and status. And be faced with severe litigations.

Anonymous
8/26/2023 11:24 AM

Keep the values going up

Anonymous
8/26/2023 11:29 AM

It would be great to have options for smaller and more affordable housing. Obviously developers are less interested in building this housing because it doesn't pay as well, so who makes up the profitability gap? Also, how can high-density housing be built and placed so that it a) doesn't add a ton of traffic to already over-busy areas like the Marketplace and b) is financially sustainable for the Town over the long run (ie, property taxes compensate for the increased need for infrastructure?) We'd like to have clear answers to all of these questions before supporting any more residential construction anywhere in town, especially if it would come at the expense of commercial development (eg, high paying jobs from science, engineering, medical, etc.)

Anonymous
8/26/2023 11:26 AM

A community where everyone can live , including the preschool teacher and the person who works at target

Anonymous
8/26/2023 11:30 AM

None

Anonymous
8/26/2023 11:35 AM

That Superior becomes much more diverse across the board. Housing, employment, people.

Anonymous

Sustainability. Don't try to be Boulder. We don't need to be a big

8/26/2023 11:35 AM	town. Just be a great place for all.
Anonymous 8/26/2023 11:37 AM	n/a
Anonymous 8/26/2023 11:41 AM	A very few more apartments.
Anonymous 8/26/2023 11:42 AM	Low income housing does not have a space in this community and will create a new set of issues this community does not want to face.
Anonymous 8/26/2023 11:41 AM	Same as now with better infrastructure and schools
Anonymous 8/26/2023 11:43 AM	To have more availability
Anonymous 8/26/2023 11:48 AM	I would like to see developers focus on smaller family units (townhomes, co ops, etc) that families can actually afford to purchase or rent. I would also like to see some kind better protections against price gouging in the area. Our rent has increased nearly 20% in two years, and we are not sure if this is a community we will be able to continue to live in if that continues to be the case. Please consider addressing predatory landlords in the future.
Anonymous 8/26/2023 11:49 AM	Housing for Seniors, parents of residents to be close by, young adult kids to live in Superior.
Anonymous 8/26/2023 11:55 AM	Include low income housing with higher income housing so it blends into the neighborhood.
Anonymous 8/26/2023 11:54 AM	More multi family complexes, improved transit
Anonymous 8/26/2023 12:11 PM	Let the market determine the nature of housing built, leave government bureaucrats out of the process.
Anonymous 8/26/2023 12:14 PM	Don't need any low income housing. It is available in Lafayette, louisville and Broomfield.

Anonymous 8/26/2023 12:19 PM	No more housing period. Keep our town small.
Anonymous 8/26/2023 12:26 PM	Do we need to grow? We're jamming a lot of housing in our downtown area.
Anonymous 8/26/2023 12:38 PM	No need to change what we're doing. We need to encourage young people to think about the careers they choose and how those coincide with their wishes for living conditions. Encourage talented people to enter the trades if they so choose and not waste money on a college education they can't afford, and might not want.
Anonymous 8/26/2023 12:38 PM	Not a concern
Anonymous 8/26/2023 12:41 PM	1) Checks and balances are put in places for RMMA. 2) There's somewhere to live for those who struggle with stairs. The Wee Cottages are a joke both for price and for amount of stairs. I'm 55 with a 17 year old. As I look to retirement, this is not where I will choose to live. Sad about that. Would have loved to see ranch house community being built.
Anonymous 8/26/2023 12:41 PM	Maintain mostly single family homes
Anonymous 8/26/2023 01:11 PM	Let the market determine it and keep govt out of it
Anonymous 8/26/2023 12:48 PM	A balanced blend of all income levels, not just the wealthy
Anonymous 8/26/2023 01:09 PM	More homes with options to add ADU's to help families offset the cost of their home.
Anonymous 8/26/2023 01:14 PM	I'd like to see more affordable houses for a broader range of socioeconomic groups.
Anonymous 8/26/2023 01:17 PM	More balance in housing availability and price

Anonymous 8/26/2023 01:33 PM	Our hope is keep Superior clean and safe. Existing commercial spaces can be repurposed to attract good businesses. A new K12 charter school is a must have considering our highly educated community.
Anonymous 8/26/2023 01:36 PM	More smaller homes with some yards for kids and pets and gardens
Anonymous 8/26/2023 02:02 PM	I support ADU's partly because of the lack of available land for development. In addition, I've read that the outcome for lower income families that live in housing that is integrated into the neighborhoods rather than segregated into separate low-income housing have better outcomes including for the children in their families. I'm concerned that previous low-income subsidized housing proposals in the town talk about work-force housing, but that in looking at their other housing units in Boulder County run by the same organization, the availability for the higher-end low-income families was minimal. I'm more concerned that the narrative provided to the town residents was misleading than I was concerned about having some low-income residents in our town.
Anonymous 8/26/2023 02:13 PM	No trailer homes or low income housing. Keep apartments and townhomes low. Single family or multi generational housing is where Superior should focus.
Anonymous 8/26/2023 02:18 PM	None
Anonymous 8/26/2023 02:20 PM	My hope is that Superior will keep the same housing vision it has had--family centered, small town centered, well manicured.
Anonymous 8/26/2023 02:26 PM	If the constant noise from airport and construction will continue - I don't care how Superior will be developed, I'd rather move to a more quiet and less populated place
Anonymous 8/26/2023 02:30 PM	No more affordable housing! There's enough hideous blocks of buildings. We need larger homes with yards and space. Stop building homes on top of each other and for God's sake, stop building multi-family dwellings!
Anonymous	Affordable, quality single family homes

8/26/2023 02:31 PM

Anonymous
8/26/2023 02:30 PM

That the community will maintain the high standards that have caused it to be a desirable place to live and work.

Anonymous
8/26/2023 02:39 PM

More affordable housing for teachers

Anonymous
8/26/2023 02:48 PM

I'd love to see moderately priced and subsidized semi-detached homes that would make good starter homes for young couples/families.

Anonymous
8/26/2023 02:45 PM

I would like to know that affordable housing is available and easy to access to citizens of all of Colorado instead of just the select few who can afford Boulder County pricing.

Anonymous
8/26/2023 02:59 PM

Don't have a comment

Anonymous
8/26/2023 03:01 PM

Need more smaller, ranch homes for empty nesters to downsize into.

Anonymous
8/26/2023 03:05 PM

X

Anonymous
8/26/2023 03:15 PM

My vision is to see pricing continue to rise so that I can use the equity in my retirement.

Anonymous
8/26/2023 03:23 PM

Stop building!

Anonymous
8/26/2023 03:33 PM

I would like to see more middle income homes

Anonymous
8/26/2023 03:40 PM

I'd like to see that dual-income households can afford reasonably nice places to live, and that residents take pride in their homes and town and keep them nice.

Anonymous
8/26/2023 03:52 PM

Don’t know

Anonymous 8/26/2023 04:05 PM	Affordability and steady supply
Anonymous 8/26/2023 04:23 PM	As above. Town of Superior needs professional urban planners.
Anonymous 8/26/2023 04:27 PM	Superior is the most beautiful city in this area, we need only less noise from the airport, more good grocery stores and doctors offices.
Anonymous 8/26/2023 04:27 PM	I want Superior to NOT be overcrowded and filled with ugly apartment buildings.
Anonymous 8/26/2023 04:27 PM	There are beautiful towns outside of Superior where people with lower income can live.
Anonymous 8/26/2023 05:17 PM	Spaces my kids could afford
Anonymous 8/26/2023 05:37 PM	Less housing. We don't have to be like every other development. We can be unique and there are economic incentives from that too. Keep our small town soul.
Anonymous 8/26/2023 05:43 PM	Double current value.
Anonymous 8/26/2023 05:53 PM	Homes for everyone’s price needs not just the wealthy and Uber rich. My husband makes 120k+ and the homes were still very much out of reach for average person.
Anonymous 8/26/2023 06:03 PM	More flexibility with mixed housing types within neighborhoods and less separation of various income levels and housing types to certain parts of town.
Anonymous 8/26/2023 06:19 PM	None
Anonymous 8/26/2023 06:40 PM	Stability

Anonymous 8/26/2023 06:43 PM	Single family homes in old town.
Anonymous 8/26/2023 07:14 PM	More affordable housing so that people who provide services here and work in schools could afford to live close to their jobs. More busses or more multi- unit housing closer to public transport
Anonymous 8/26/2023 07:18 PM	That Superior can transition from a largely single-family-home town to more dense housing where we can put it and it can provide the transit to free more residents from car dependence.
Anonymous 8/26/2023 07:21 PM	Building cap
Anonymous 8/26/2023 07:35 PM	I would like to see a variety of housing options for families and aging seniors in our community. It's a wonderful community. I'm not sure what the specific types of homes that are needed to make that happen.
Anonymous 8/26/2023 07:41 PM	I'm not sure, but I know that I don't want a giant apartment block to be built here, but perhaps apartments with only 4 units per building? Maintain the less dense feel of the town.
Anonymous 8/26/2023 07:41 PM	Lower interest rates
Anonymous 8/26/2023 08:22 PM	It would be wonderful to be able to afford a home with a backyard to live my life and provide the quality of housing that my family deserves.
Anonymous 8/27/2023 07:34 AM	n/a
Anonymous 8/27/2023 07:51 AM	Stop building more condos/townhomes
Anonymous 8/27/2023 08:15 AM	Why is this a priority? Appreciate the effort here but this is not where our time should be spent.

Anonymous 8/27/2023 09:15 AM	I hope that people consider accessibility, community resources such as schools, and quality of life when deciding if existing land should be used for higher occupancy density housing. Schools are crowded, limited roads into/out of town, and many aren't being good stewards of our environment (parks and trails). There is plenty of apartment housing in Broomfield near Flatirons Mall/Interelocken and it lacks the feel of being a small town/community. I hope we don't end up with that sort of community atmosphere as it is not why I purchased a home here in Superior.
Anonymous 8/27/2023 09:18 AM	Affordable home prices and rents for single people earning under $80,000
Anonymous 8/27/2023 11:11 AM	My hope is that all the items I mentioned in number six above are addressed.I've lived in Superior for nearly 30 years and now in my 60s. At some point we'll probably need to move to a more senior friendly town or neighborhood. It's unfortunate this wasn't addressed as part of the master plan. But if it's between having senior housing or maintaining open space would prefer the latter
Anonymous 8/27/2023 11:44 AM	I would like the community to remain as is, and not strive to be something it cannot because of its small size.
Anonymous 8/27/2023 12:15 PM	I'd like fire remediation efforts and to not have multiple planes flying overhead per minute.
Anonymous 8/27/2023 01:41 PM	More affordable and senior housing that is accessible including assisted living. It would be nice to have transitional housing for persons with mental health needs.
Anonymous 8/27/2023 02:00 PM	No housing increase. I'd like to see more commercial development.
Anonymous 8/27/2023 02:11 PM	Long term ADU rentals… no slums
Anonymous 8/27/2023 02:18 PM	Instead of focusing on more housing units and cramming more people into an already cramped area, why doesn't the city invest in bolstering the infrastructure that can assist people to move easily and freely from the North side of the Rock Creek all the way down to down town without having to use motorized vehicles. Other than the side walk

	along the McCaslin, there is little bike/walking paths that make a connection between the new park/open space and upper Superior/Rock Creek areas. McCaslin is not really conducive for a young family to go by bike when cars are barreling down that hill. Also having a 5-6 y/o bike back up that hill is not an easy feet as well. My point is concentrate on enhancing the amenities to city before allocating funds to more housing.
Anonymous 8/27/2023 06:35 PM	Almost every square foot of Superior is already packed with housing. It's a fairly high-end residential neighborhood, and that is what it should remain and will. Anyone who has bought here in recent years has invested their hard-earned money into what Superior is, and any developments that could erode housing values should be avoided.
Anonymous 8/27/2023 06:50 PM	I think Superior can do more to add diversity of housing, but it can't just be us. What is Louisville doing or Boulder compared to the density that already exists in Superior.
Anonymous 8/27/2023 07:56 PM	We hope the Town can finally solve the airport noise and expansion problem so that Superior can return to being a livable area and the value of our homes will not plummet. Our Mayor and Trustees need to dedicate themselves to solving this problem; town leadership is a results-oriented endeavor!
Anonymous 8/27/2023 08:19 PM	Superior sets some goals around % of affordable units in its housing stock.
Anonymous 8/27/2023 09:47 PM	Zero. Again, our woke Town Mayor and Council will 100% fuck this thing up and destroy property values in our= Town.
Anonymous 8/28/2023 06:05 AM	That we don't overbuild.
Anonymous 8/28/2023 07:37 AM	I hope Superior copies what is being built on Main Street in Downtown Superior. I think we need more of it, especially closer to the RTD bus stop where there is a ton of surface parking lots. I also hope there is more emphasis placed on design requirements for buildings. The apartments and townhomes that are a majority of brick/stone with muted paint colors are much more appealing than the vibrantly colored townhomes that change drastically right next to each other. More people will support density if it looks good. Also, Superior is very family-centric, and I do believe more families would live in

	higher density areas if housing with enough space was available. A 4-bedroom, 3,000 SF townhome would be incredibly appealing to our family, but I'm aware parking requirements (2 car garage for 3 bedroom and 3 car garage for 4 bedroom) make this more difficult to build.
Anonymous 8/28/2023 09:00 AM	The only possible housing that would be useful is patio homes/homes that those who have been in the neighborhood for a long time could move to after our kids are grown and gone. That would open more individual homes. PLEASE STOP GROWTH!!!
Anonymous 8/28/2023 09:27 AM	My vision is that we will continue to offer a high quality of life, including safety, preservation of green space, and low traffic. I fully support creative housing that offers products and price points that are different than buying a $1M+ large Rock Creek home. However, I think we already offer a nice variety of options, when you consider Downtown Superior, Rogers Farm, Sagamore, and the proximity of Bell Flatirons. We do not need to cram large-scale multi-family into our neighborhoods (and yes, we know that Sagamore and Original Town are the places you will try to do this.) If we build "affordable" housing, let's keep it classy and do cottage court, wee homes, small-scale multi-family (duplexes, etc.) There is an abundance of large scale multi-family in surrounding areas that are easy to get to (Broomfield, Thornton, Westminster, etc.) and we as Superior do not have to be all things to all people. It's a small town, and cramming in a bunch of affordable housing will significantly alter the quality of life for those of us who have already invested in being here.
Anonymous 8/28/2023 10:20 AM	Superior sadly will never be affordable again.
Anonymous 8/28/2023 10:23 AM	Hoping to reduce environmental concerns in Superior (air traffic noise and pollution from RM airport); possible pollution from Rocky Mtn Flats Reserve.
Anonymous 8/28/2023 10:52 AM	If you are going to build, add more patio homes for those in the community who already live here to stay as they age out of their larger houses. Otherwise, STOP BUILDING!
Anonymous 8/28/2023 11:53 AM	The roll up scale of housing should have been here from day 1 but coporate housing is what built the "apartments" that there are so the prices have never ever been affordable. Nothing will change with this all, especially given the escalating property taxes. Just that alone will

	raise the rent on people because those inert costs (insurance too!) are passed on and no one is taking those things into account along with the actual cost of the physical property.
Anonymous 8/28/2023 12:39 PM	My hope is that any plans or Rock Creek have children in mind. We want our kids to be able to walk, scoot, bike or drive safely to the schools that are close enough where that should not be an issue.
Anonymous 8/28/2023 04:55 PM	That people of many different incomes can live in and enjoy this community
Anonymous 8/28/2023 07:30 PM	None
Anonymous 8/29/2023 05:25 AM	That we can accommodate seniors affordably
Anonymous 8/29/2023 09:05 AM	Price appreciation.
Anonymous 8/29/2023 09:28 AM	That I can continue to live the in community
Anonymous 8/30/2023 07:07 AM	Better socio-economic mix of residents...easier for younger families to get into the neighborhood...more options for workforce housing, middle-income residents
Anonymous 8/30/2023 09:26 AM	No need to add housing in Superior.
Anonymous 8/30/2023 02:25 PM	Affordable housing
Anonymous 8/31/2023 10:28 AM	Affordable housing projects are costly to maintain and regulate with a lot of compliance requirements and often have "unintended" consequences. Boulder has a large Affordable housing program and has now realized that middle income residents are being priced out of the market. The developer has to make a profit so after the affordable homes are built, the balance of the homes are priced higher to provide the developer with a profit- this results in homes at the high and low ends and squeezes out the middle income homes.

Anonymous 8/31/2023 11:59 AM	My vision is to keep Superior the town it has been and popularly known for which is single family homes that feels secure, well maintained, neighborly, for all ages.
Anonymous 8/31/2023 08:56 PM	Remain living in Superior throughout retirement.
Anonymous 9/01/2023 07:19 AM	That no more development take place - infill if needed but don't expand the development footprint
Anonymous 9/01/2023 08:06 AM	More multigenerational housing options available
Anonymous 9/01/2023 10:17 AM	For a well balanced and vibrant community that welcomes diversity in race, ethnicity, economic status and values. We need to make room for more workforce housing. The teachers at our local schools should be able to live here too.
Anonymous 9/01/2023 03:12 PM	That affordable housing is available for people that live and work in the community and there is a reasonable stabilization in prices
Anonymous 9/01/2023 03:38 PM	I would love to see home ownership options for families at 60-80% AMI. I would love to see options for downsizing that offer an economic advantage. I would love to see more children in our neighborhoods and able to attend our fine schools.
Anonymous 9/01/2023 03:54 PM	I do not want Superior to be a commuter town.
Anonymous 9/01/2023 03:54 PM	I don't envision Superior as a housing community for the city of Boulder.
Anonymous 9/01/2023 10:06 PM	Senior and assisted long options with community activities and opportunities to stave off loneliness. Also, more proactive opportunities for food and shelter for those who need it. All people have the right to live with dignity, have access to healthcare and mental health support. Would be kind to provide bus passes (eco passes) to enable those of working age / ability to access employment opportunities. Possibly match unemployed with available

	jobs within the community.
Anonymous 9/02/2023 01:49 PM	More options for families / households who make $100k or slightly less per year. Townhomes, 1 or 2 bedroom options.
Anonymous 9/03/2023 07:34 AM	Continue to develop housing in areas of undeveloped land in a thoughtful way
Anonymous 9/03/2023 08:23 AM	That there be affordable homes with low transportation required for households earning 30-60% of the AMI in the community--especially those who work here but travel from other locations. That there be smaller, one level units for persons aging in place. That there be efforts to educate that climate adapted homes are more important than those meeting a culture-driven aesthetic.
Anonymous 9/03/2023 01:27 PM	Please stop building apartments, condos, townhomes, etc.! There's too many in the area. Families want to own houses, but the house options are becoming less and less. Also, Superior is suppose to be a quaint family town... with the "downtown superior", never-ending complexes, and modern buildings and shops, Superior is losing it's quaint town feel and therefore going to lose their residents and community.
Anonymous 9/04/2023 08:28 PM	I hope that Superior can find a way to offer some affordable housing in the next 10+ years.
Anonymous 9/06/2023 06:54 AM	Not sure
Anonymous 9/07/2023 01:26 PM	We would love to see housing that our teachers can afford while making $20 - $22 per hour wage.
Anonymous 9/07/2023 01:43 PM	We need to provide housing that the people working in Superior can afford. Develop town15. Consider multistory and ADU's.
Anonymous 9/07/2023 03:30 PM	Try and build lower priced condos, houses and duplexes.
Anonymous	Smaller ranch or patio homes (2 bedroom); but where would they go

9/07/2023 04:41 PM	at this point? Seems pretty built out. Or 1-2 bedroom flat apartments with elevators
Anonymous 9/07/2023 07:34 PM	Lower property taxes.
Anonymous 9/08/2023 03:37 AM	I would like to see a nice mix of all price levels, ownership structures, and building designs spread out as evenly as possible throughout the community. But once again my biggest fear is the south half of Superior becoming a blighted zone in the sense of property values driven down leading to heavy and sporadic turnover of ownership with a breakdown in community.
Anonymous 9/08/2023 03:21 PM	retain the nature and soul of Superior, not letting it get overwhelmed by too many new residents packed into dense housing. Increase in crime and decrease in quality of life if too many renters and high density housing flood Superior. Downtown Superior does not mesh with the rest of Superior whatsoever, it looks terrible and is far too dense, is making McCaslin dangerous and too busy, and bringing far too many people to one spot.
Anonymous 9/08/2023 03:48 PM	To not develop any more
Anonymous 9/09/2023 03:25 PM	I would love to see Superior be a community that welcomes individuals from all backgrounds, which can only happen with affordable housing opportunities and more housing overall.
Anonymous 9/11/2023 01:32 PM	Housing prices will increase. Need to allow supply to increase t9 help affordability
Anonymous 9/11/2023 08:41 PM	A more diverse range of priced (both rental and owned) homes and housing that supports a senior demographic near a walkable neighborhood, to promote more socialized and independent aging.
Anonymous 9/11/2023 09:57 PM	That people in the community would welcome people of all incomes and backgrounds not just people who can afford to buy a single family home for $1 million. Sadly, most of the affordable single family homes were lost in the Marshall fire.

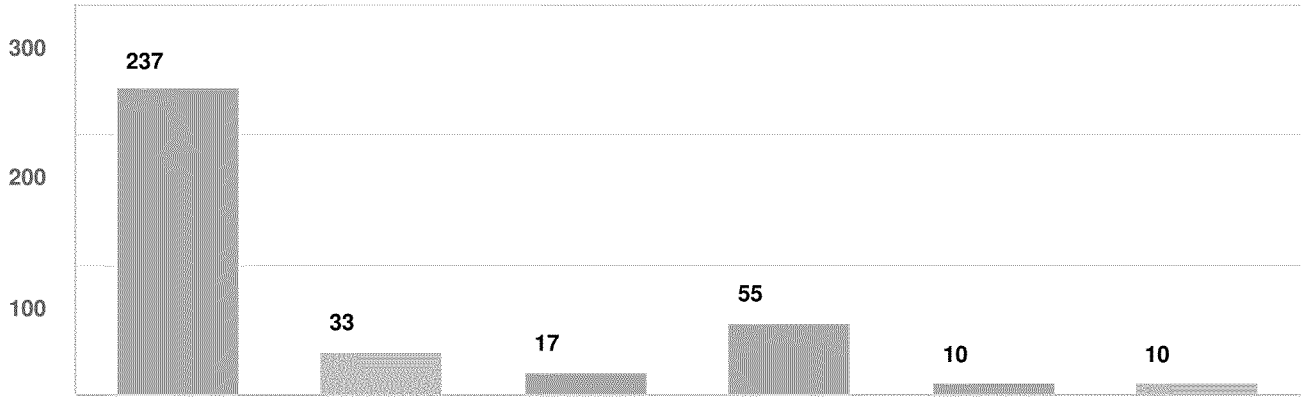
Anonymous 9/15/2023 06:59 PM	Can comment as there are always ebb and flow with housing nationally
Anonymous 9/26/2023 03:46 PM	Allow ADU's in neighborhoods like Rock Creek.
Anonymous 9/26/2023 04:02 PM	x
Anonymous 9/27/2023 07:49 PM	Availability of affordable housing options in almost all household income ranges.
Anonymous 9/30/2023 05:52 AM	Less single family homes
Anonymous 10/02/2023 01:24 PM	I really love Superior but the rent is becoming unaffordable for retired superior resident.
Anonymous 10/02/2023 01:09 PM	I doubt anything will change
Anonymous 10/02/2023 01:16 PM	Homes my own daughters who grew up in Superior can actually afford. I'm shocked that the 'wee cottages' started at $500k. Wow... I'd like to see possibly townhomes for sale to qualifying people in the $300-$350k range.
Anonymous 10/02/2023 01:15 PM	Looking for affordable housing.
Anonymous 10/02/2023 01:16 PM	n/a
Anonymous 10/02/2023 01:40 PM	I would love to see more areas like a Rock Creek. I really don't like the new downtown Superior area. To commercial and high density. It's all tall buildings with little to no yard. For a person like me, who hopes to raise a family, I wouldn't move to any of these new neighborhoods. My older parents as well, because everything is stairs. There is zero balance. It's all high density. Even the mini homes they are building are smashed together. It has turned out nice bedroom community is a giant mess.

Anonymous 10/02/2023 02:03 PM	I hope we can see an increase in the affordability of housing for people who are working, BUT I don't want to see Superior's housing owned by more landlords than homeowners. We need more inhabitants and fewer "investors". Houses are HOMES, not a way to outperform the stock market.
Anonymous 10/02/2023 02:17 PM	I would like to see it stay relatively the same. We don't have crime and issues that other communities near us do because we are small and relatively expensive. I like it this way.
Anonymous 10/02/2023 04:00 PM	Please do not build any more housing. It would burden schools, communities, traffic.
Anonymous 10/02/2023 04:01 PM	Keeping it just the way it is, small and wonderful. We are not the town to solve housing and affordability crises.
Anonymous 10/03/2023 12:06 AM	More affordable housing is necessary and so is the infrastructure to support a growing population
Anonymous 10/03/2023 04:32 PM	Cap growth, focus on open space and community building
Anonymous 10/03/2023 04:47 PM	Lower property taxes.
Anonymous 10/05/2023 09:05 AM	Allow for ADUs and the conversion of detached single family homes into duplexes. Deed restricted affordable housing needs to be incorporated into our community, in all forms of housing.
Anonymous 10/05/2023 11:00 AM	Housing in Superior will eventually get to the point where a million dollars will be entry level for Rock Creek.
Anonymous 10/06/2023 11:21 AM	I hope that if new builds continue, they are priced a rate that households earning less than $144k can purchase. I hope that as we continue to consider and hopefully build more affordable housing, we educate the community on what this means in a positive way. Many currently state “affordable house means more transient residents which leads to higher crime.” Let’s be prepared to educate on the actual facts on not people’s fear and speculation.

Anonymous 10/09/2023 09:37 PM	Continuing maintenance of existing publicly shared areas ie roads, parks, and community center.
Anonymous 10/17/2023 11:56 AM	An emphasis on upper mid-market, single family homes in the 3-4br range. There are plenty of condo and apartment options nearby in Broomfield.

Mandatory Question (247 response(s))
Question type: Essay Question

Q8 What is your affiliation with Superior? (check all that apply)

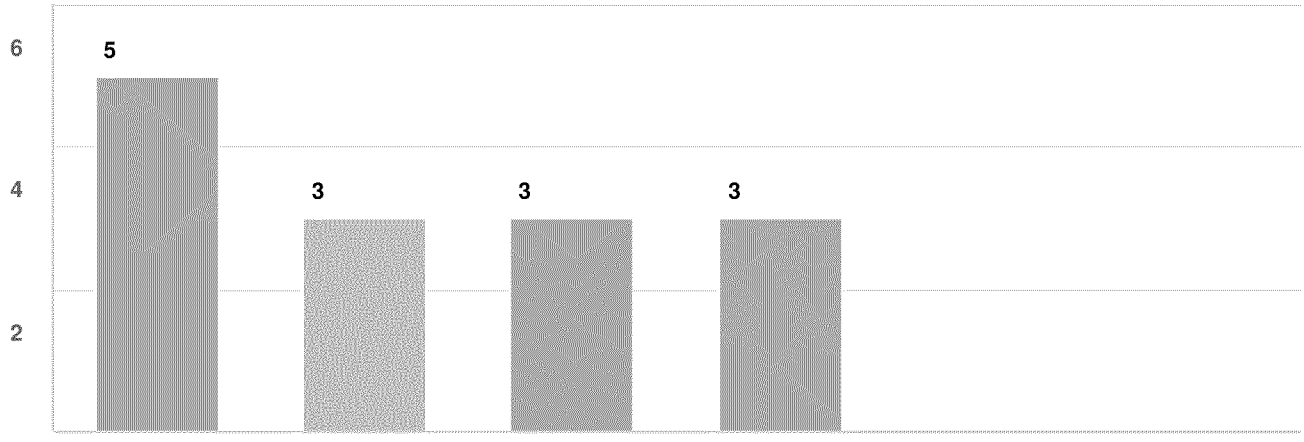


Question options

I work in the housing field in this region
I like to visit Superior
I have family in Superior
I own a business in Superior
I work in Superior
I live in Superior (includes residents affected by the Marshall Fire who are temporarily living elsewhere)

Mandatory Question (247 response(s))
Question type: Checkbox Question

Q9 Please indicate which of the following apply to you. (check all that apply)

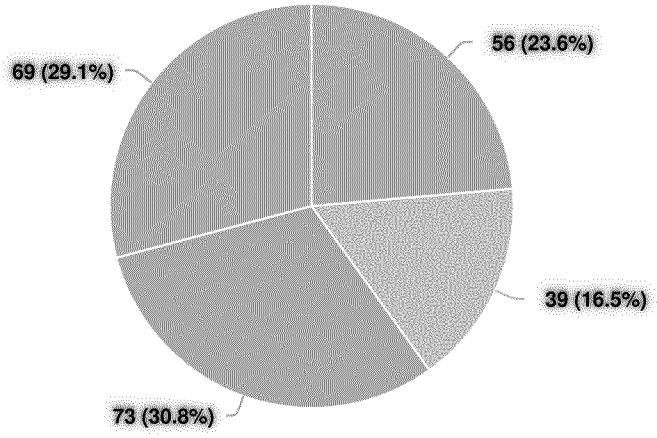


Question options

Affordable housing provider
Leasing agency
Other non-profit/advocacy
Property management
Developer
Realtor

Mandatory Question (10 response(s))
Question type: Checkbox Question

Q10 How long have you been a resident of Superior?

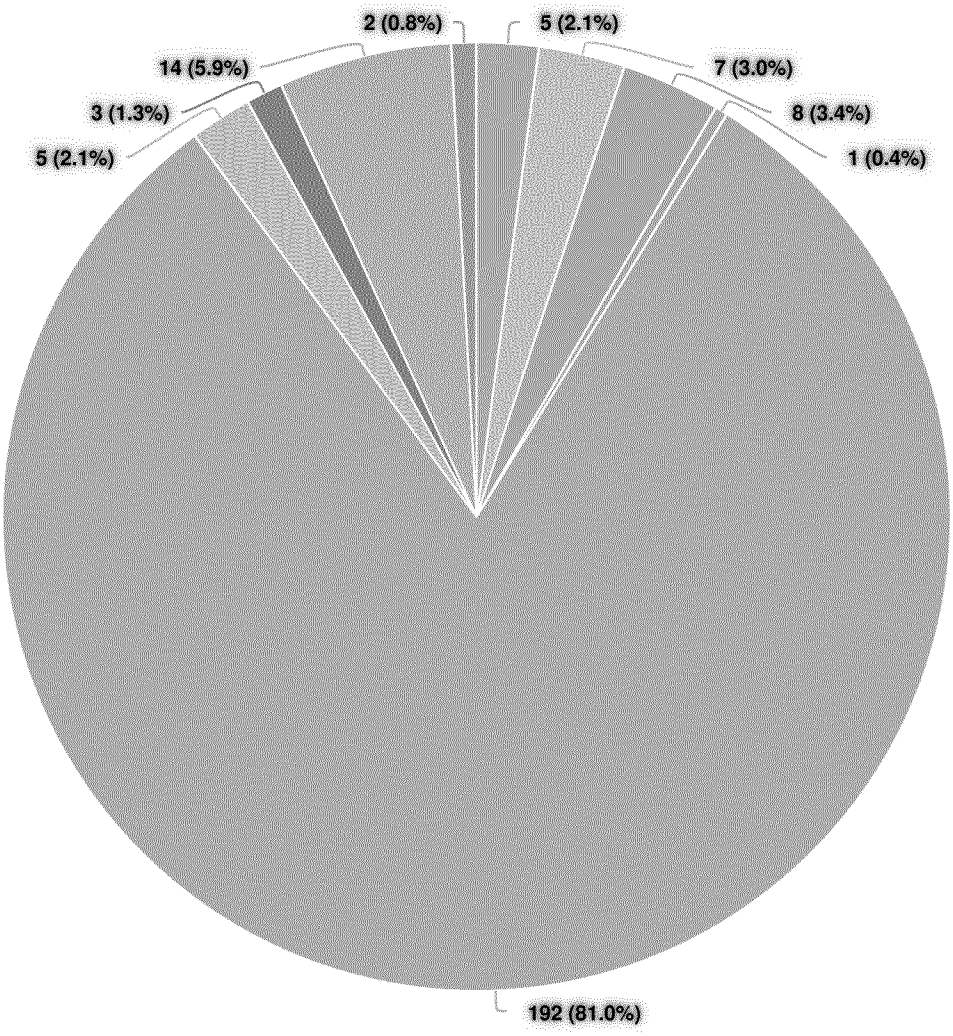


Question options

20+ years 11-20 years 6-10 years 0-5 years

Mandatory Question (237 response(s))
Question type: Dropdown Question

Q11 What neighborhood do you currently live in?Reference Map:

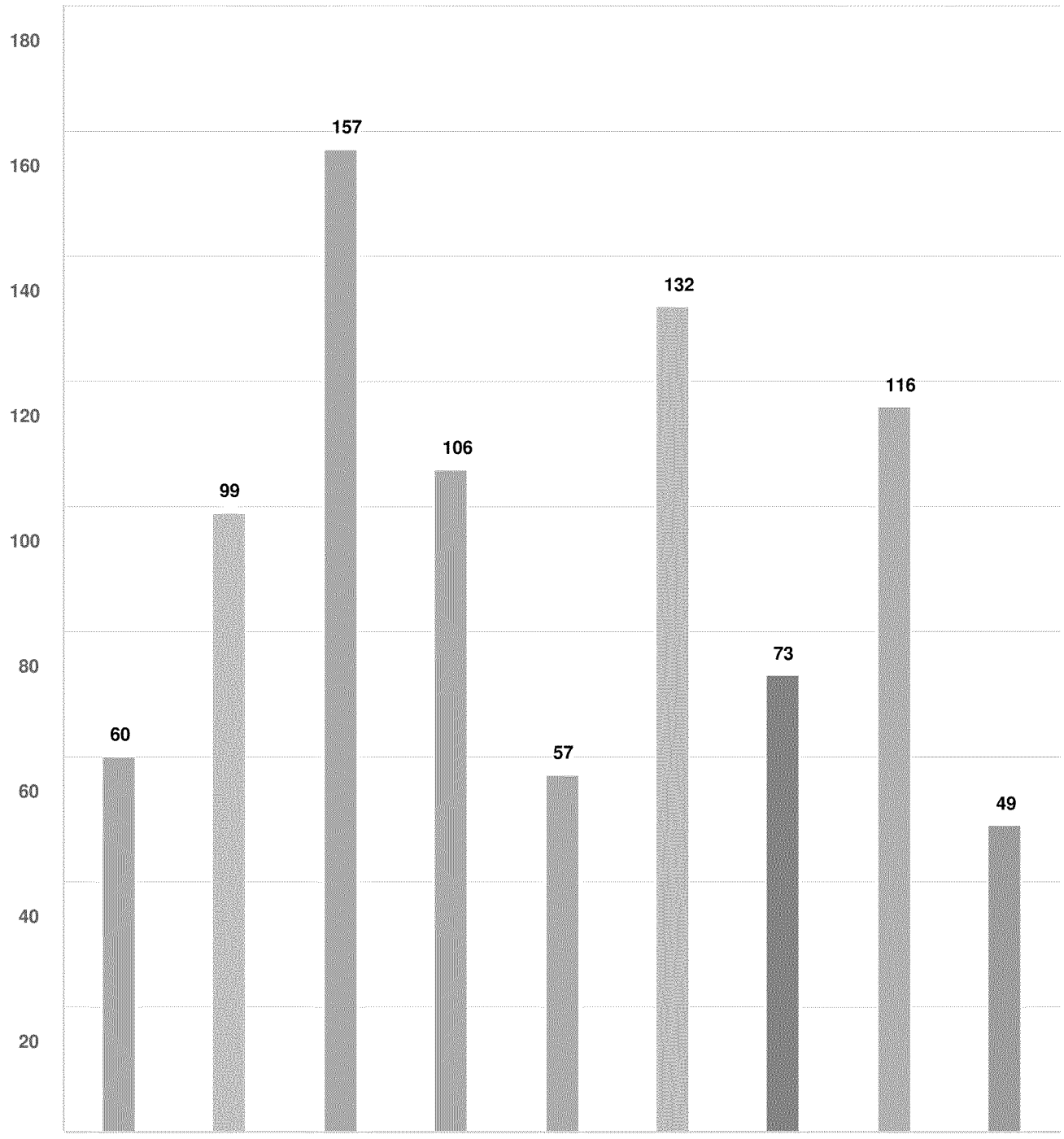


Question options

Other/Temporarily outside Superior | Downtown Superior | The Ridge | Calmante | Rock Creek | Rogers Farm | Coal Creek Crossing | Sagamore | Original Town

Mandatory Question (237 response(s))
Question type: Dropdown Question

Q12 Why did you move to Superior or why do you like living here? (check all that apply)

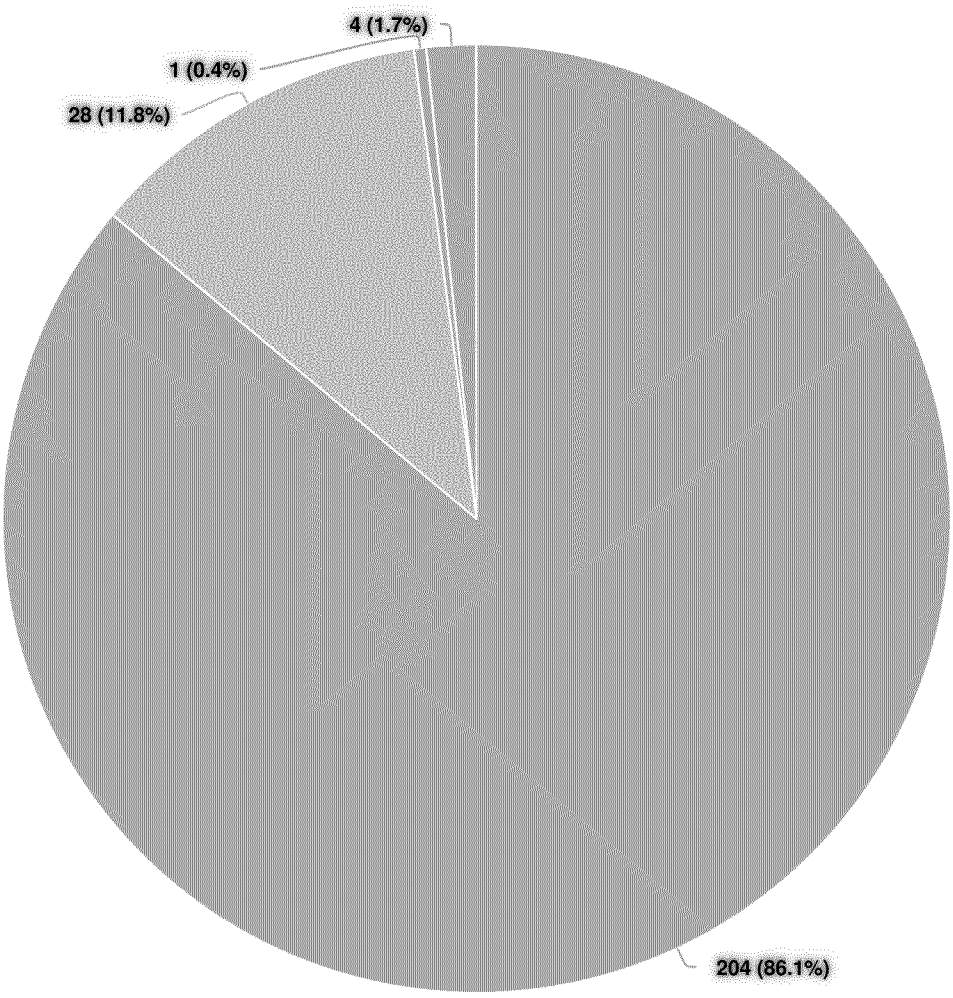


Question options

Other (please specify) Community character/identity Access to key transportation routes
Proximity to the mountains/access to recreation Proximity to family or friends Proximity to work Family-friendly
Amenities Affordability

Mandatory Question (237 response(s))
Question type: Checkbox Question

Q13 Which of the following best applies to your current housing circumstances?

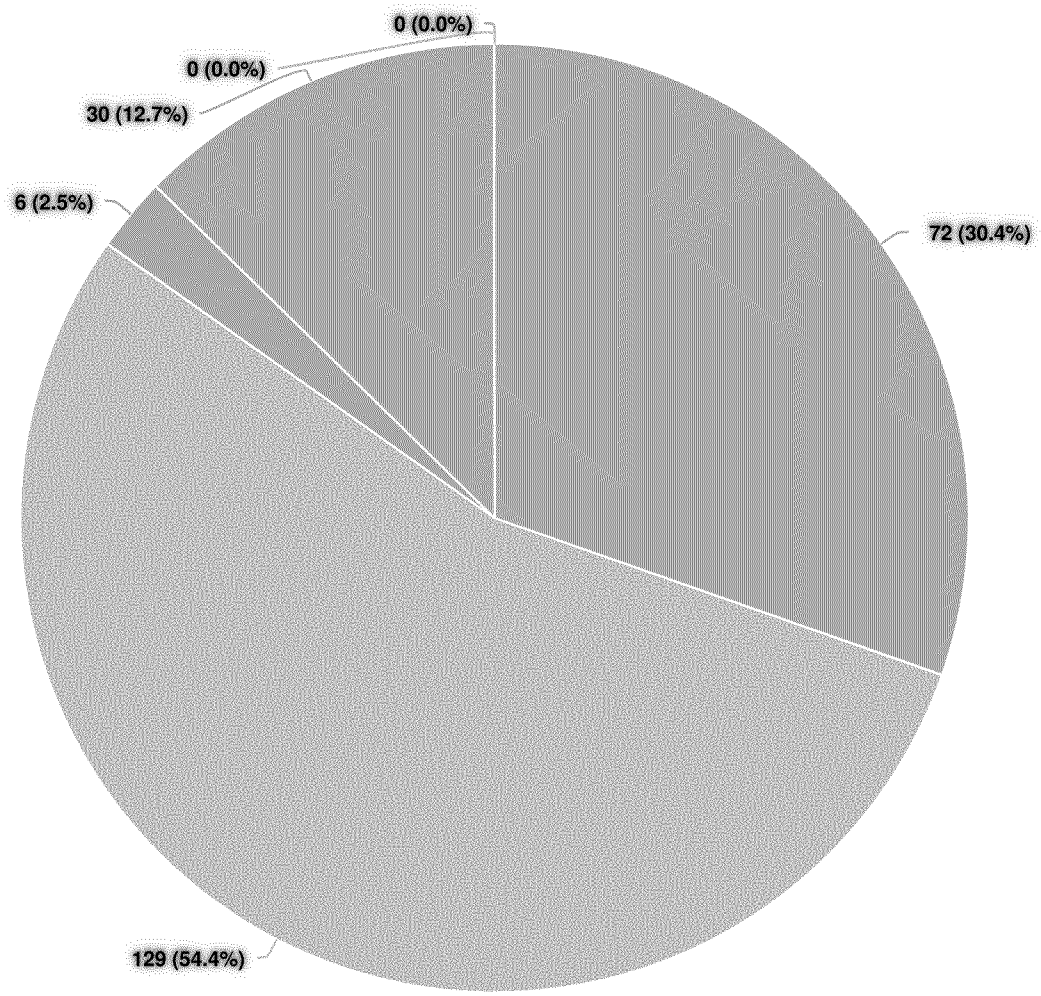


Question options

Other (please specify) I am living with parents, family or friends and do not pay for housing costs currently
I rent my home I own my home

Mandatory Question (237 response(s))
Question type: Dropdown Question

Q14 Which of the following best describes your current household composition? Note: For those affected by the Marshall Fire and currently living in a temporary situation, please select the option that best aligns with your anticipated future/permanent ...

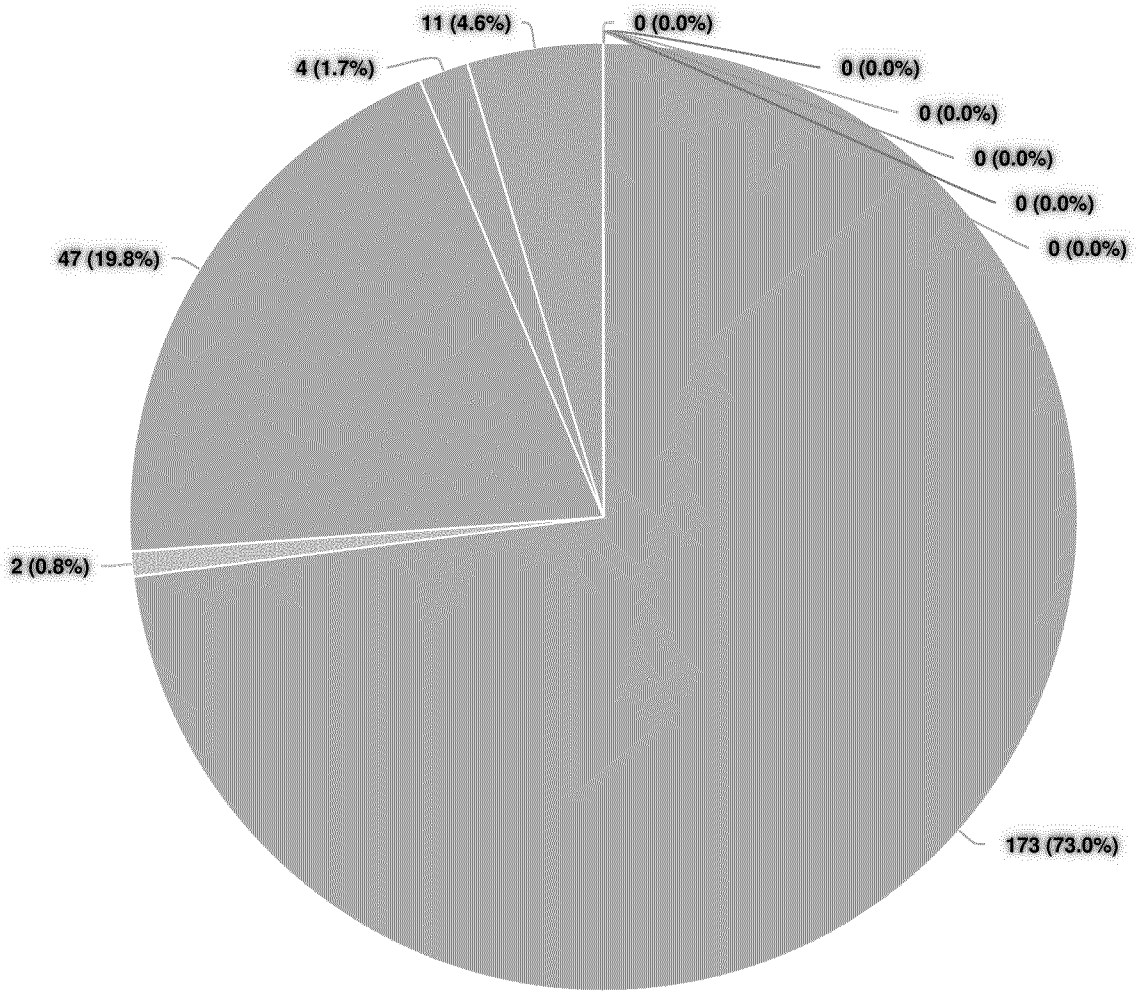


Question options

- I live in a supportive or transitional group setting
- I live with roommates
- I live alone
- I live with extended family (multigenerational/multifamily household)
- I live with my spouse or partner and kids (includes single parents or children living with their parents)
- I live with my spouse or partner (no kids)

Mandatory Question (237 response(s))
Question type: Dropdown Question

Q15 Which of the following best describes your current home? Reference Images:Single FamilyDuplex and TriplexTownhomesCottage CourtApartments, Condominiums and Mixed-UseADUs and Manufactured Homes

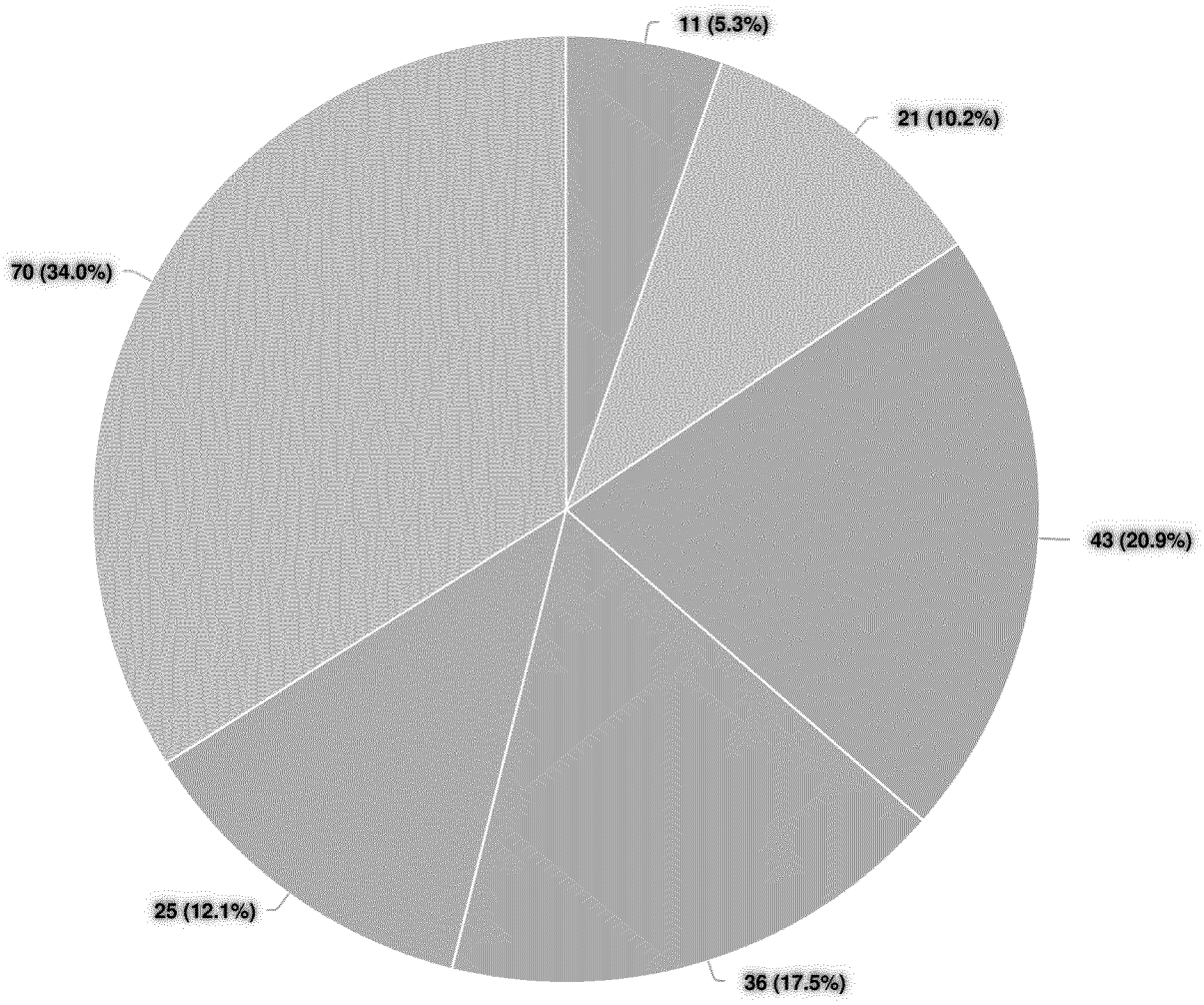


Question options

Temporary circumstance due to the Marshall Fire (hotel, with family/friends, etc.) Group, communal, or transitional housing
Mixed-use apartment or condo (above ground-floor commercial) Accessory Dwelling Unit (ADU) Manufactured home
Duplex Apartment or condo complex (10+ units) Apartment, cottage court, or condo complex (5-9 units)
Townhome Triplex or quad Single-family home

Mandatory Question (237 response(s))
Question type: Dropdown Question

Q16 Which of the following best represents your annual household income?Note: We understand that this can be a sensitive topic and have made this question optional. We ask this question because it helps us understand household income trends across the ...

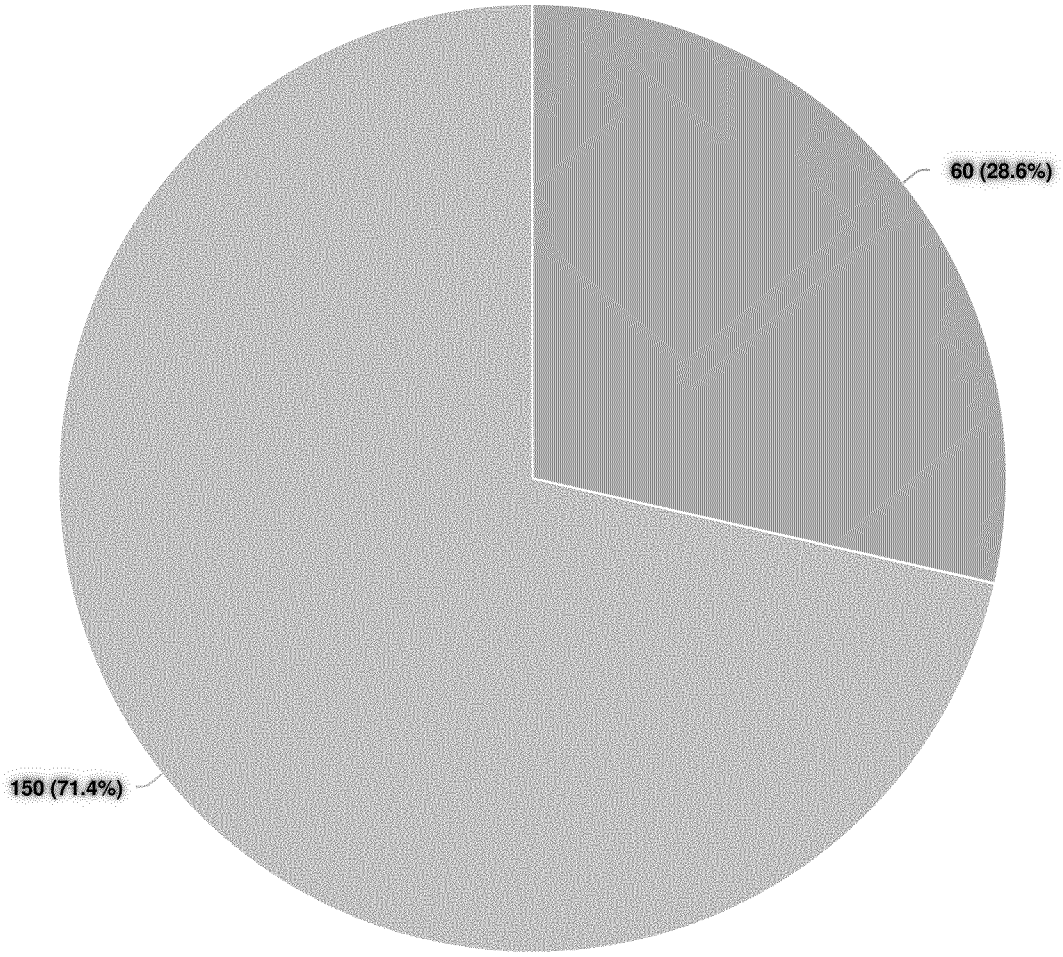


Question options

$173,000 + $144,000 to $173,000 $115,000 to $144,000 $87,000 to $115,000 $43,000 to $87,000 Up to $43,000

Optional question (206 response(s), 41 skipped)
Question type: Dropdown Question

Q17 Do you spend more than 30% of your household's income on housing costs?Note: We understand that this can be a sensitive topic and have made this question optional. We ask this question because it helps us understand housing affordability trends acr...

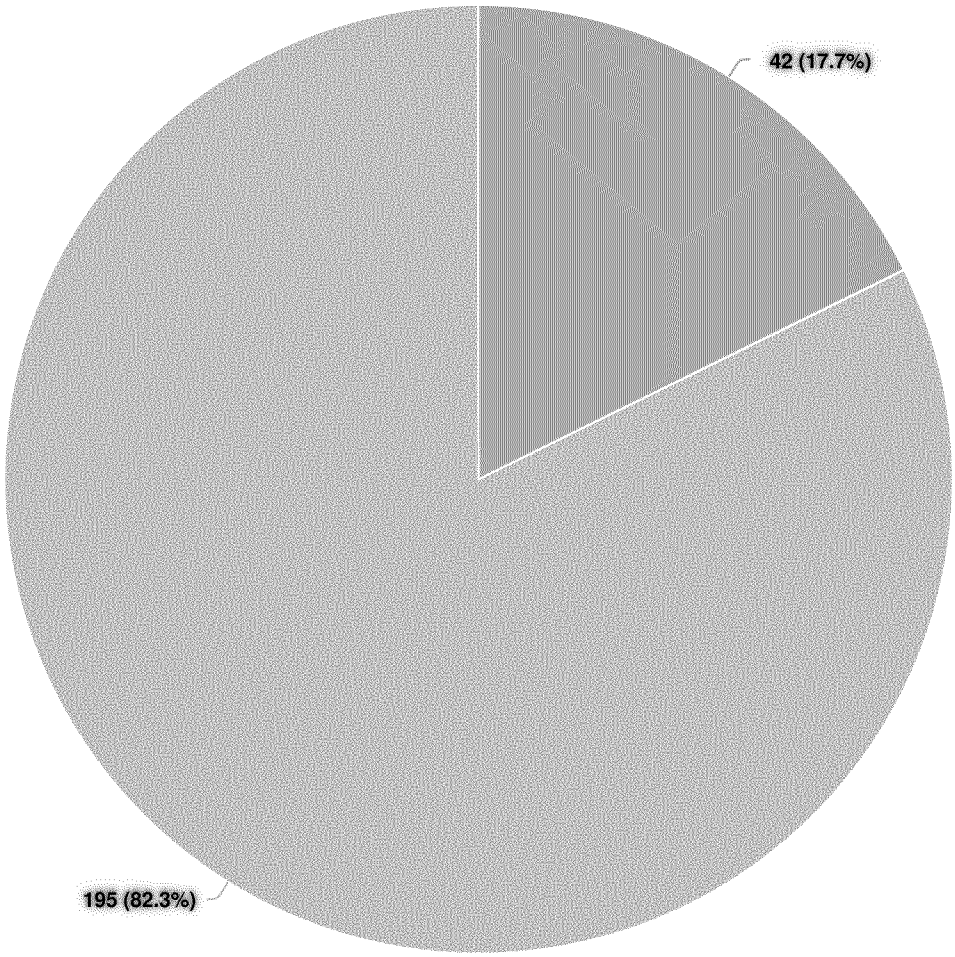


Question options

No Yes

Optional question (210 response(s), 37 skipped)
Question type: Dropdown Question

Q18 Do your transportation costs (either time or money) significantly impact the housing you feel you can afford and/or your quality of life?

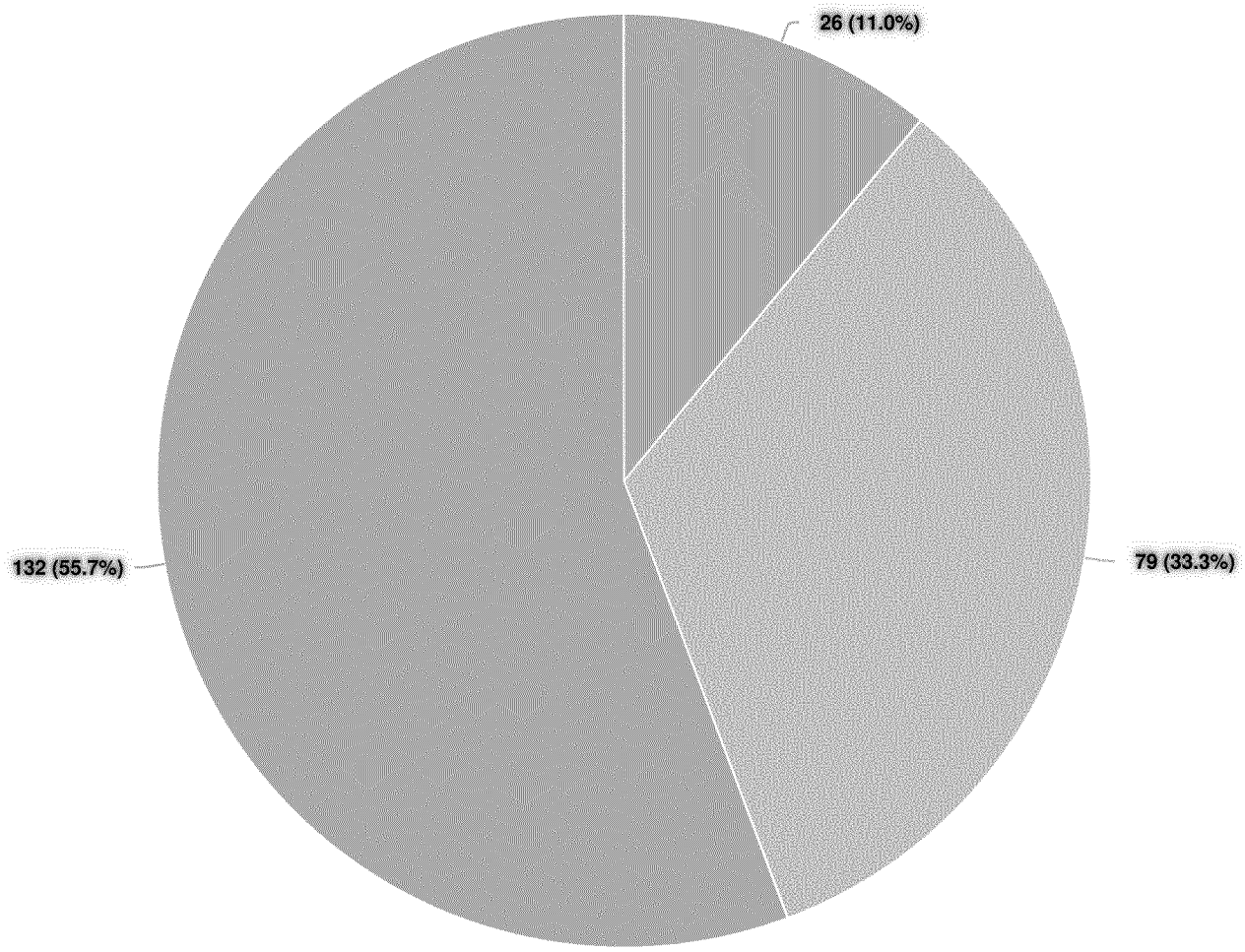


Question options

No Yes

Mandatory Question (237 response(s))
Question type: Dropdown Question

Q19 In general, how satisfied are you with your current housing circumstances (household composition, unit type/size/condition, costs, etc.)?The following section will ask more about some of your housing desires and goals.

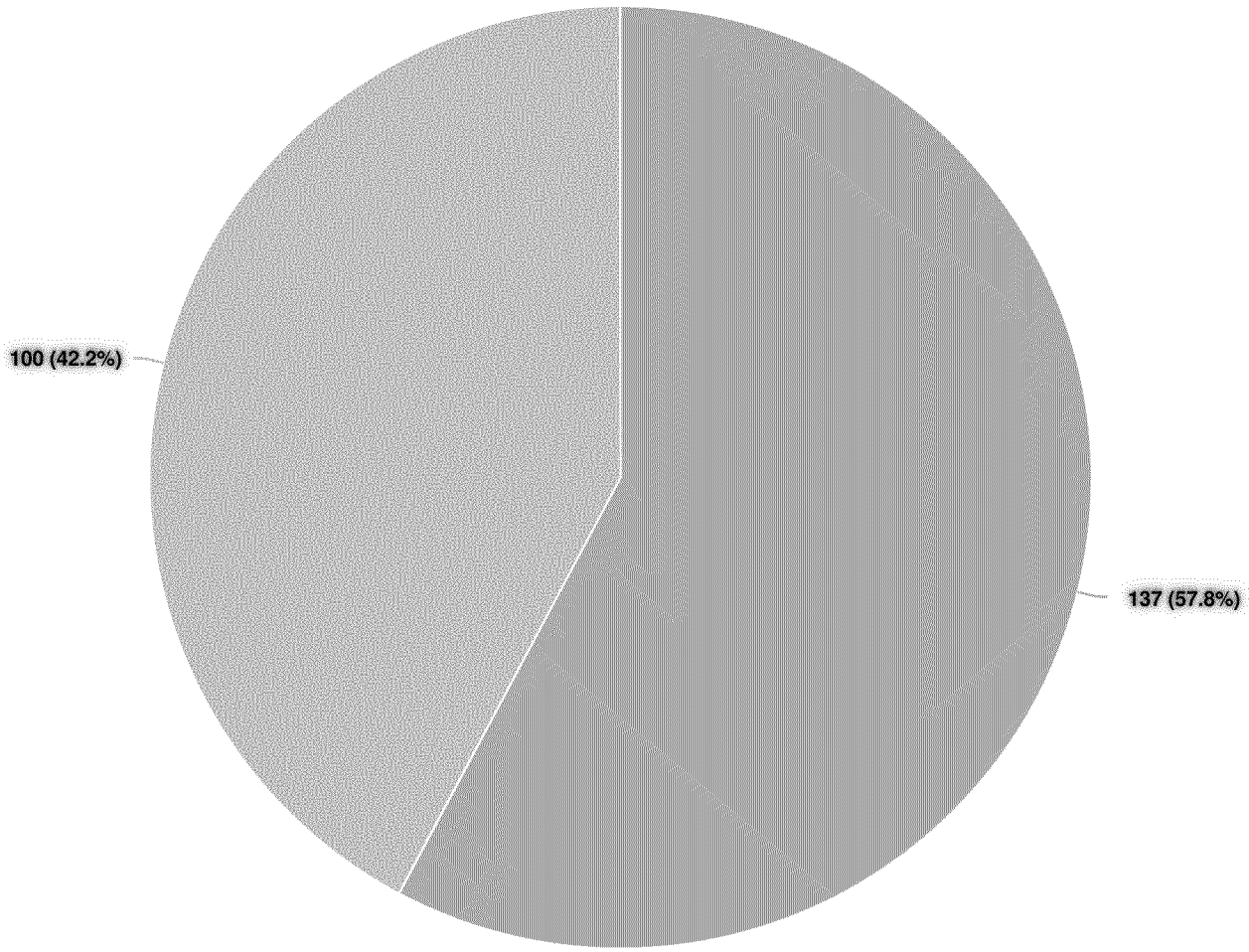


Question options

Very satisfied Somewhat satisfied Not satisfied

Mandatory Question (237 response(s))
Question type: Dropdown Question

Q20 How likely are you to move in the next 5+ years?

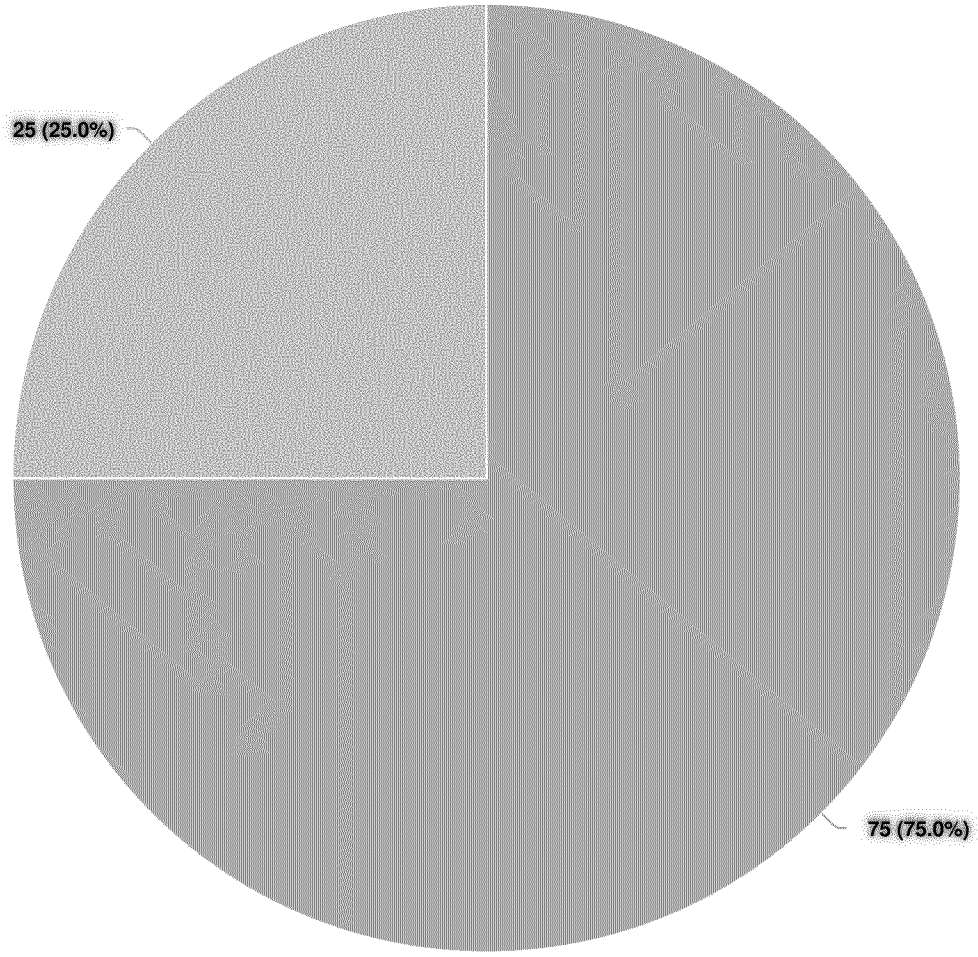


Question options

- Somewhat or very likely (thinking about it; interested in something to better meet needs; firmly planning to move; current circumstance undesirable)
- Not likely (I'm happy where I am)

Mandatory Question (237 response(s))
Question type: Dropdown Question

Q21 If the right opportunity is available, do you want to stay in Superior?

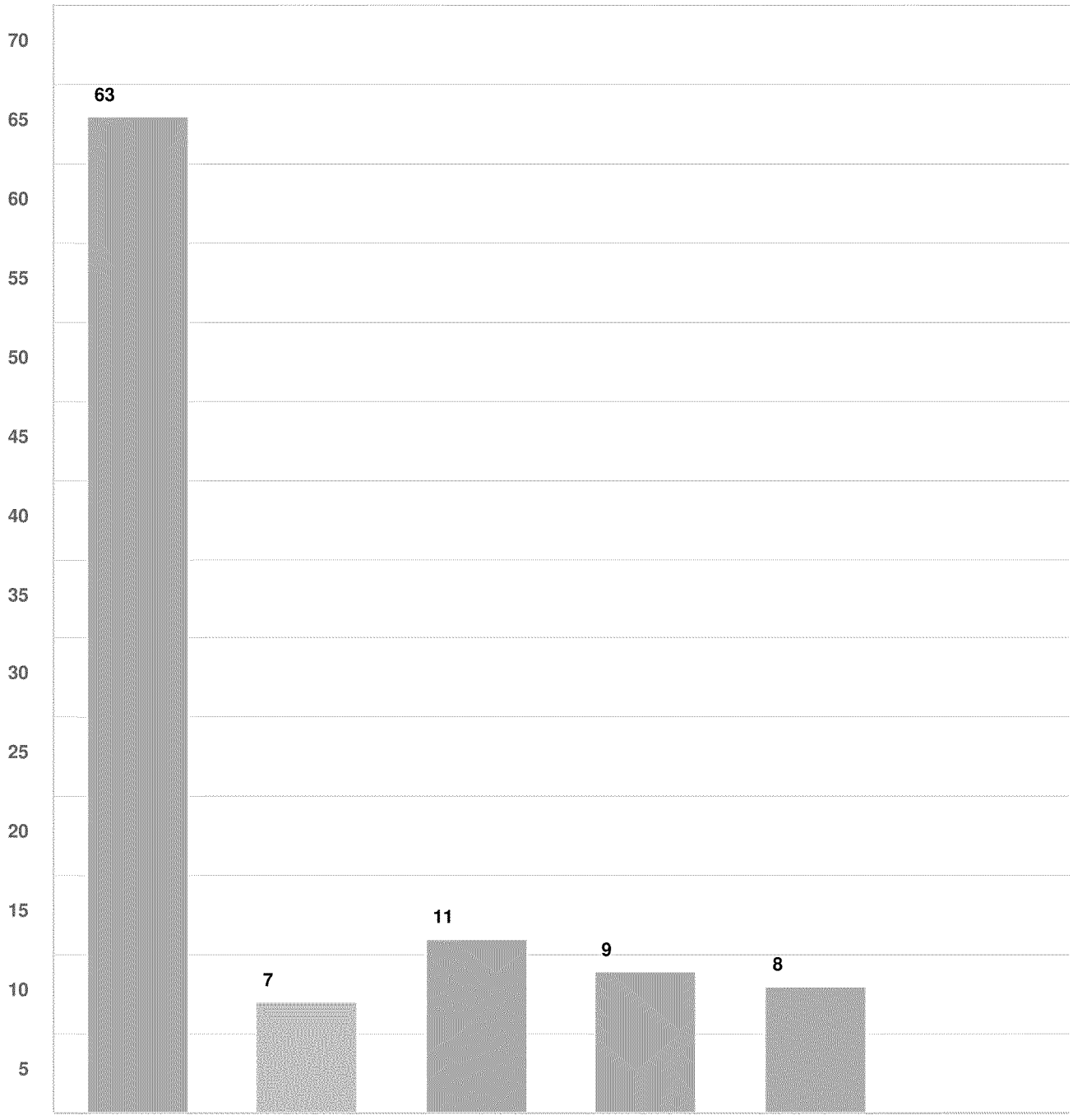


Question options

No Yes

Mandatory Question (100 response(s))
Question type: Dropdown Question

Q22 If you were to move, which of the following housing ownership and management options would you and your household be looking for and/or most interested in? (check all that apply)Informational Note: Shared equity housing mechanisms operate different...

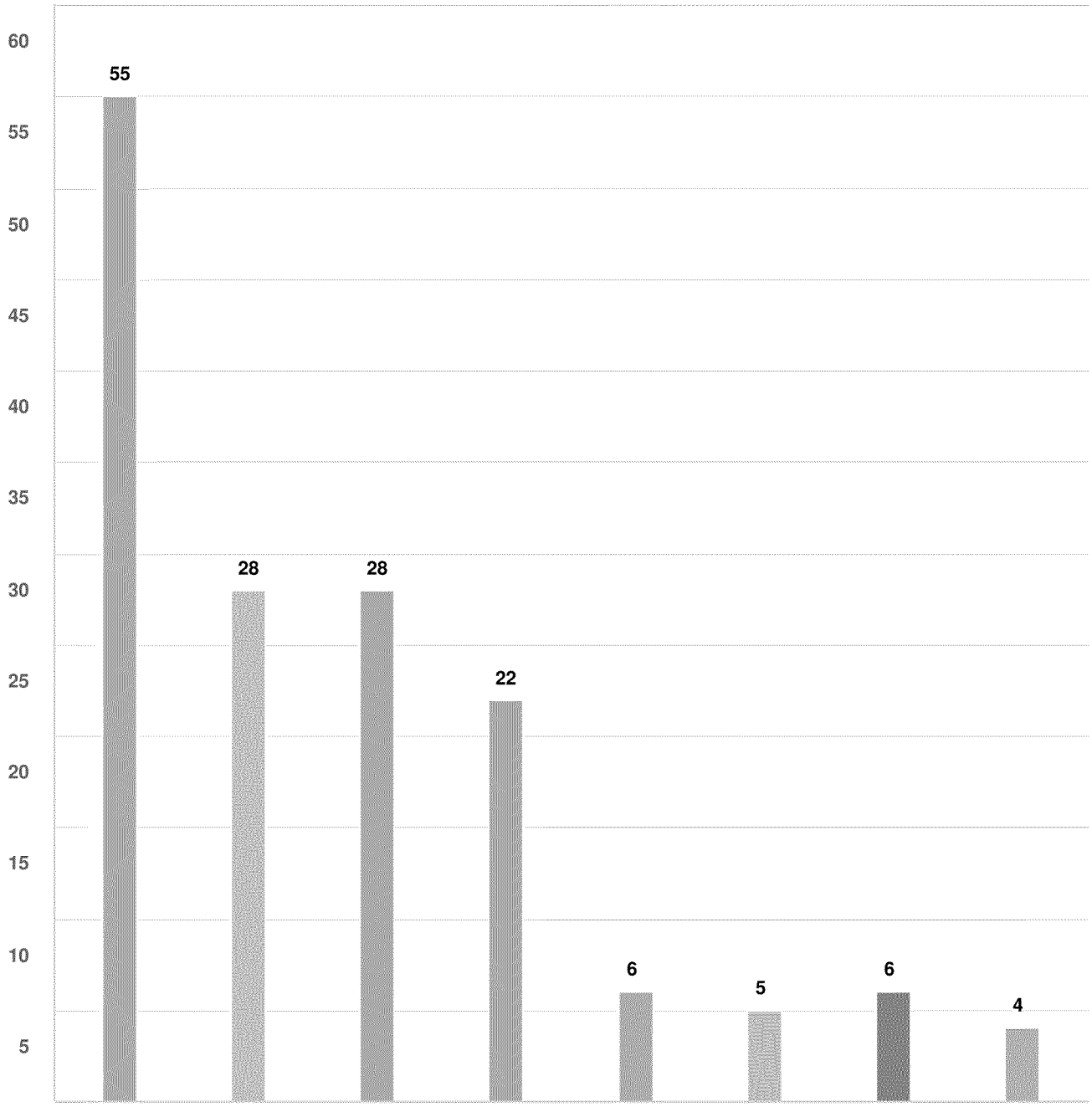


Question options

- Other assisted living for individuals with disabilities
- Subsidized affordable housing
- Assisted living or senior communities
- Alternative homeownership options, such as community land trusts and limited equity cooperatives (shared equity housing)
- Rental units
- Traditionally owned homes

Mandatory Question (75 response(s))
Question type: Checkbox Question

Q23 If you were to move, which of the following housing structure options would you and your household be looking for and/or most interested in? (check all that apply)Reference Images:Single FamilyDuplex and TriplexTownhomesCottage CourtApartments, Con...

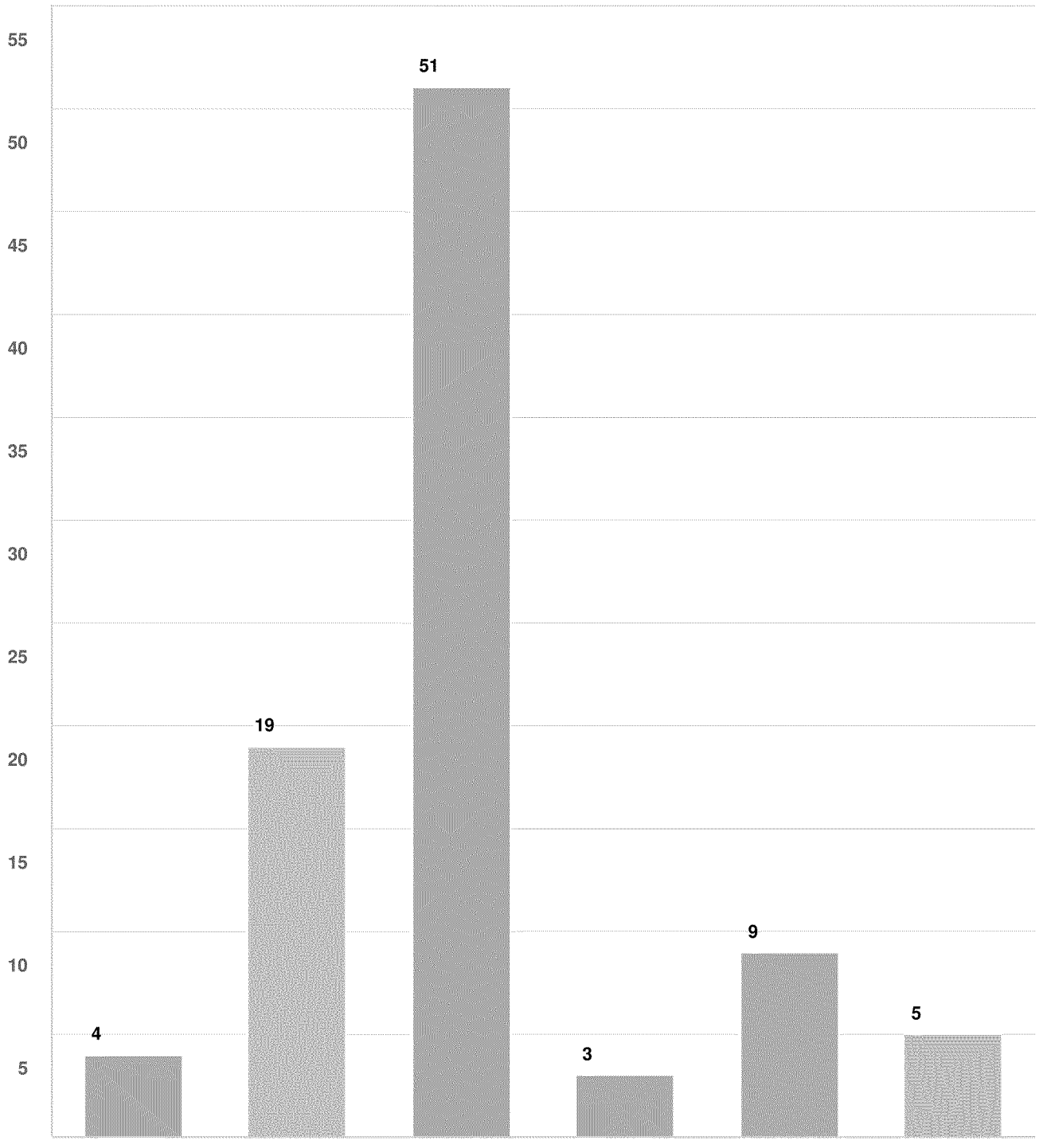


Question options

- Manufactured homes
- ADA-accessible/universal design homes
- Accessory Dwelling Units (ADU)
- Mixed-use (ground floor commercial with apartments above)
- Mid-scale multifamily (10+ units, including cottage courts, townhomes, apartments, condominiums, etc.)
- Small-scale multifamily (3-10 units, including triplexes, quads, cottage courts, townhomes, etc.).)
- Duplexes
- Single-family homes

Mandatory Question (75 response(s))
Question type: Checkbox Question

Q24 If you were to move, which of the following housing size and layout options would you and your household be looking for and/or most interested in? (check all that apply)

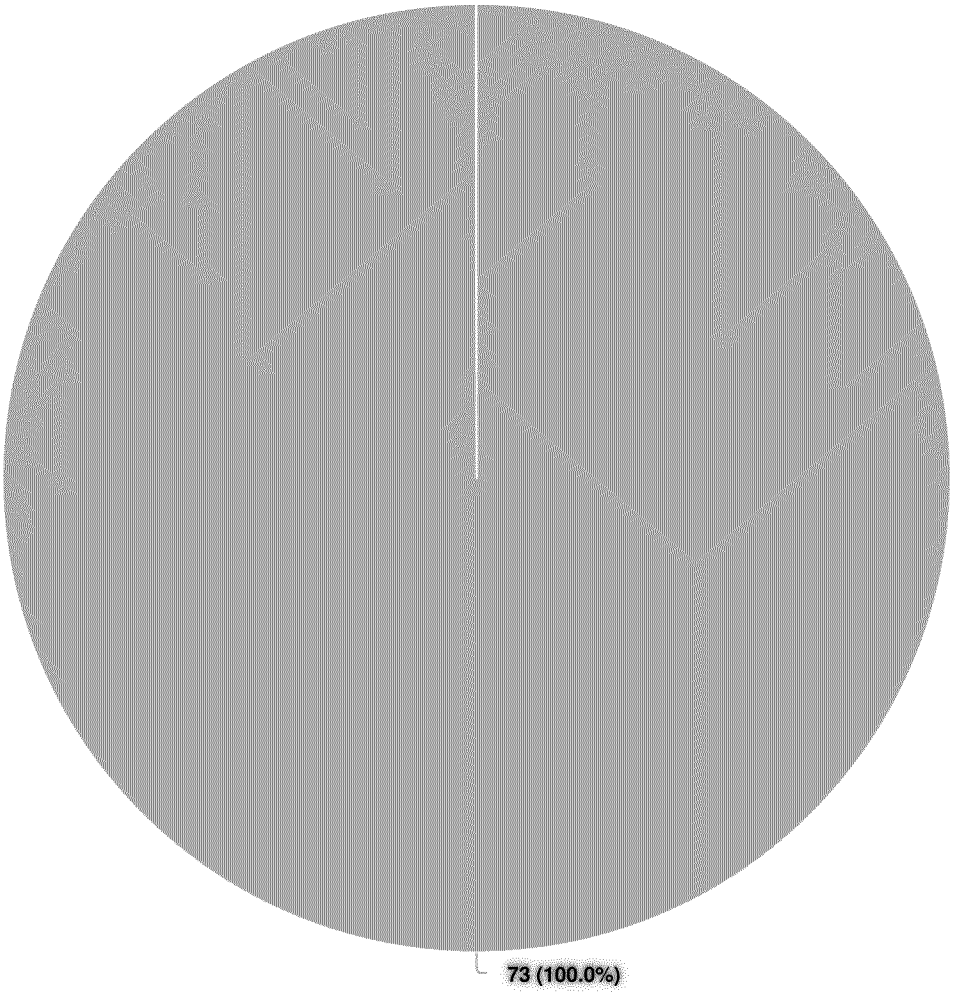


Question options

Multigenerational or cohousing (larger home, sometimes with multiple kitchens and/or entrances)
5+ bedroom units
Option 4
3-4-bedroom units
2-bedroom units
1-bedroom unit

Mandatory Question (75 response(s))
Question type: Checkbox Question

Q25 Just a few last questions, ready?

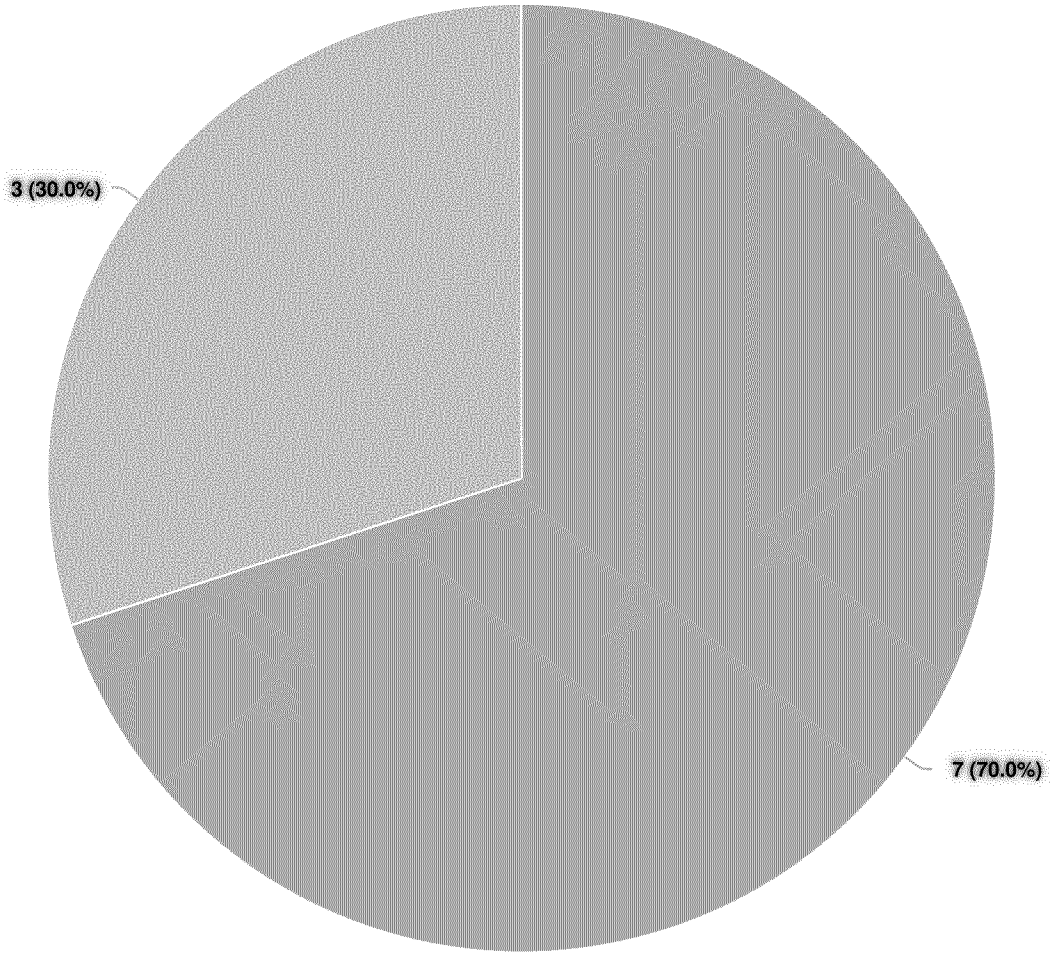


Question options

YES!

Optional question (73 response(s), 174 skipped)
Question type: Dropdown Question

Q26 Are you interested in moving to Superior in the next 5+ years?

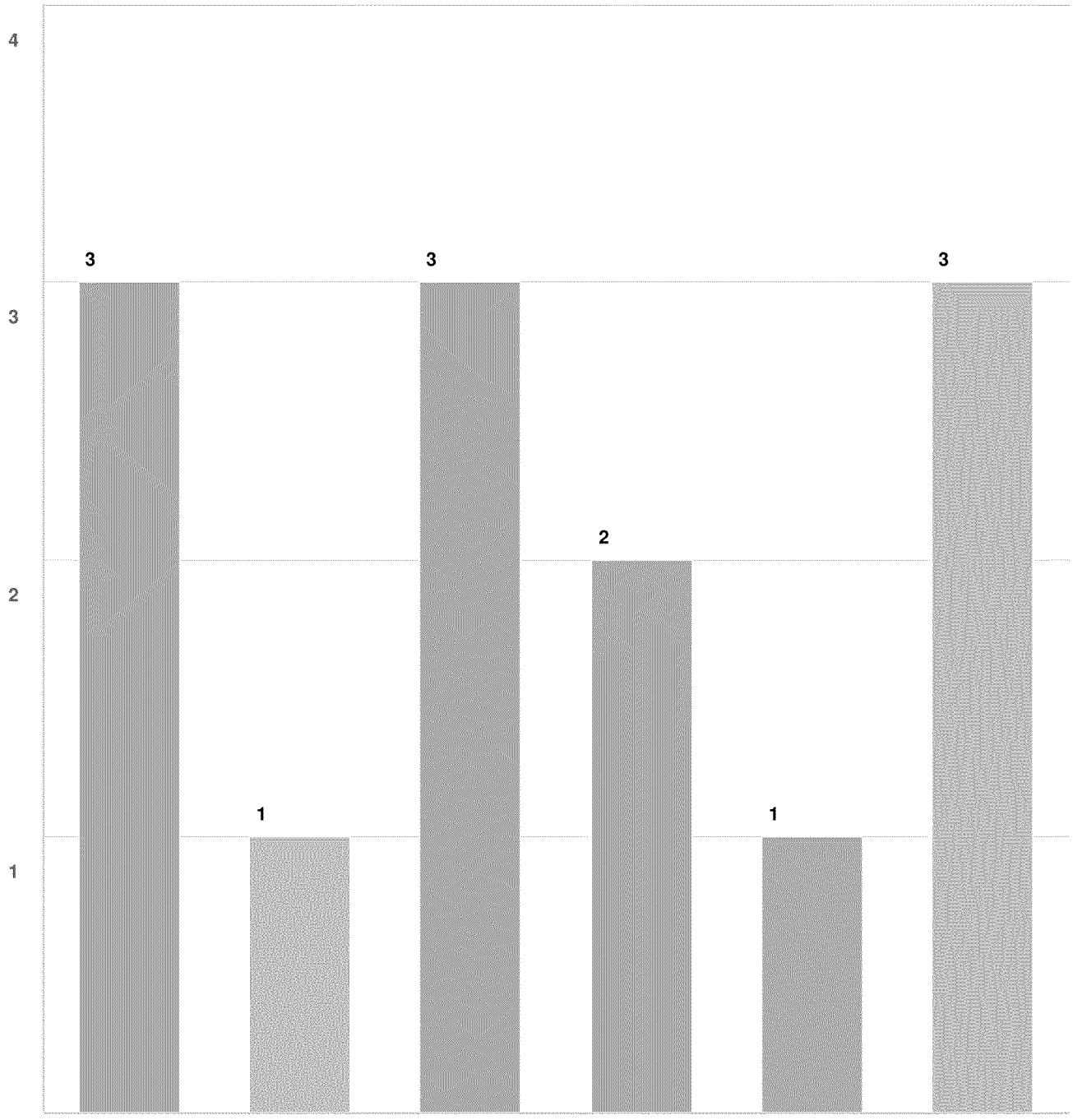


Question options

No Yes

Mandatory Question (10 response(s))
Question type: Dropdown Question

Q27 If you were to move to Superior, which of the following housing ownership and management options would you and your household be looking for and/or most interested in? (check all that apply)Note for Context: Shared equity housing mechanisms operate...

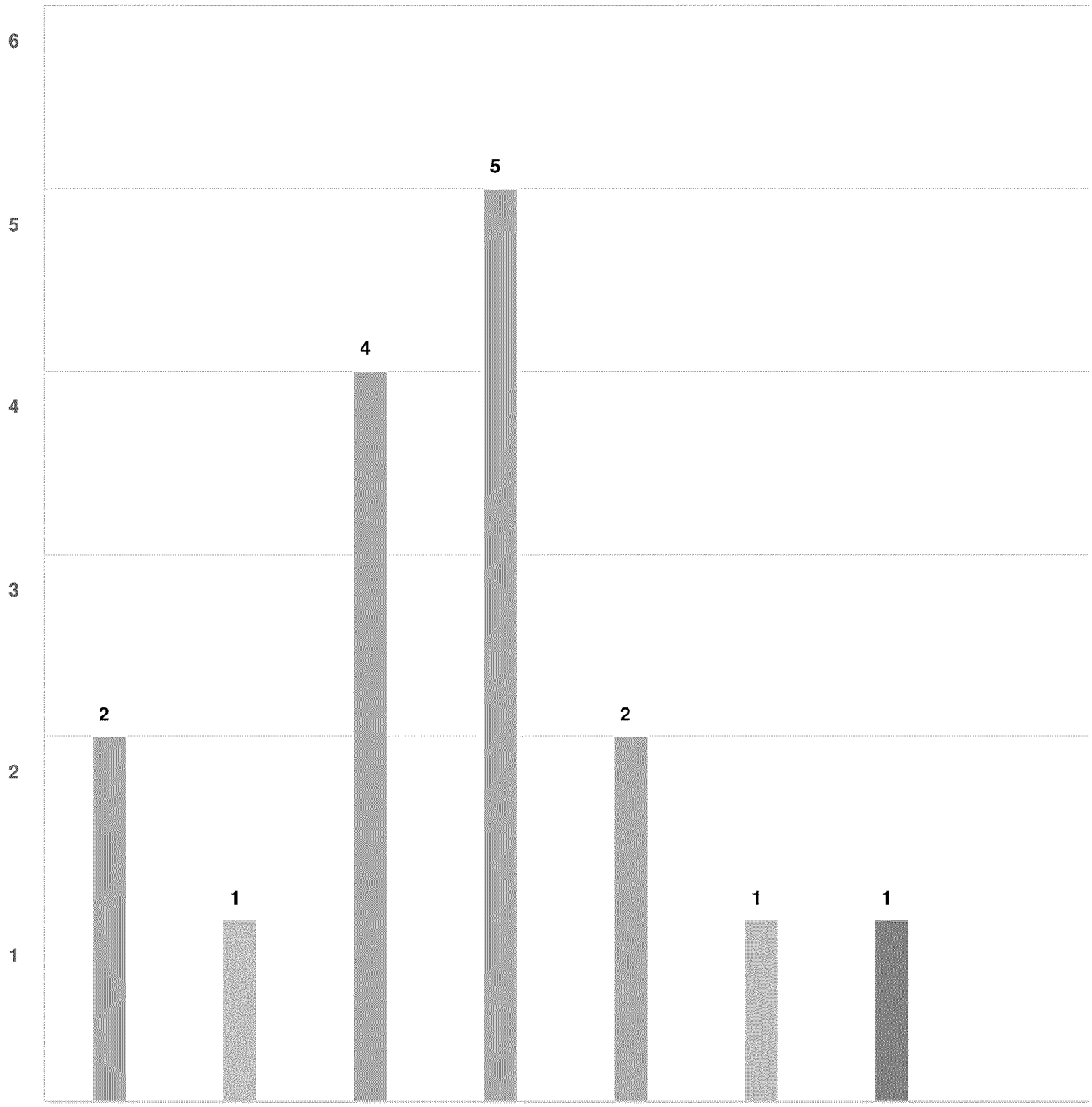


Question options

- Subsidized affordable housing
- Other assisted living for individuals with disabilities
- Assisted living or senior communities
- Alternative homeownership options, such as community land trusts and limited equity cooperatives (shared equity housing)
- Rental units
- Traditionally owned homes

Mandatory Question (7 response(s))
Question type: Checkbox Question

Q28 If you were to move to Superior, which of the following housing structure options would you and your household be looking for and/or most interested in? (check all that apply)Reference Images:Single FamilyDuplex and TriplexTownhomesCottage CourtApa...

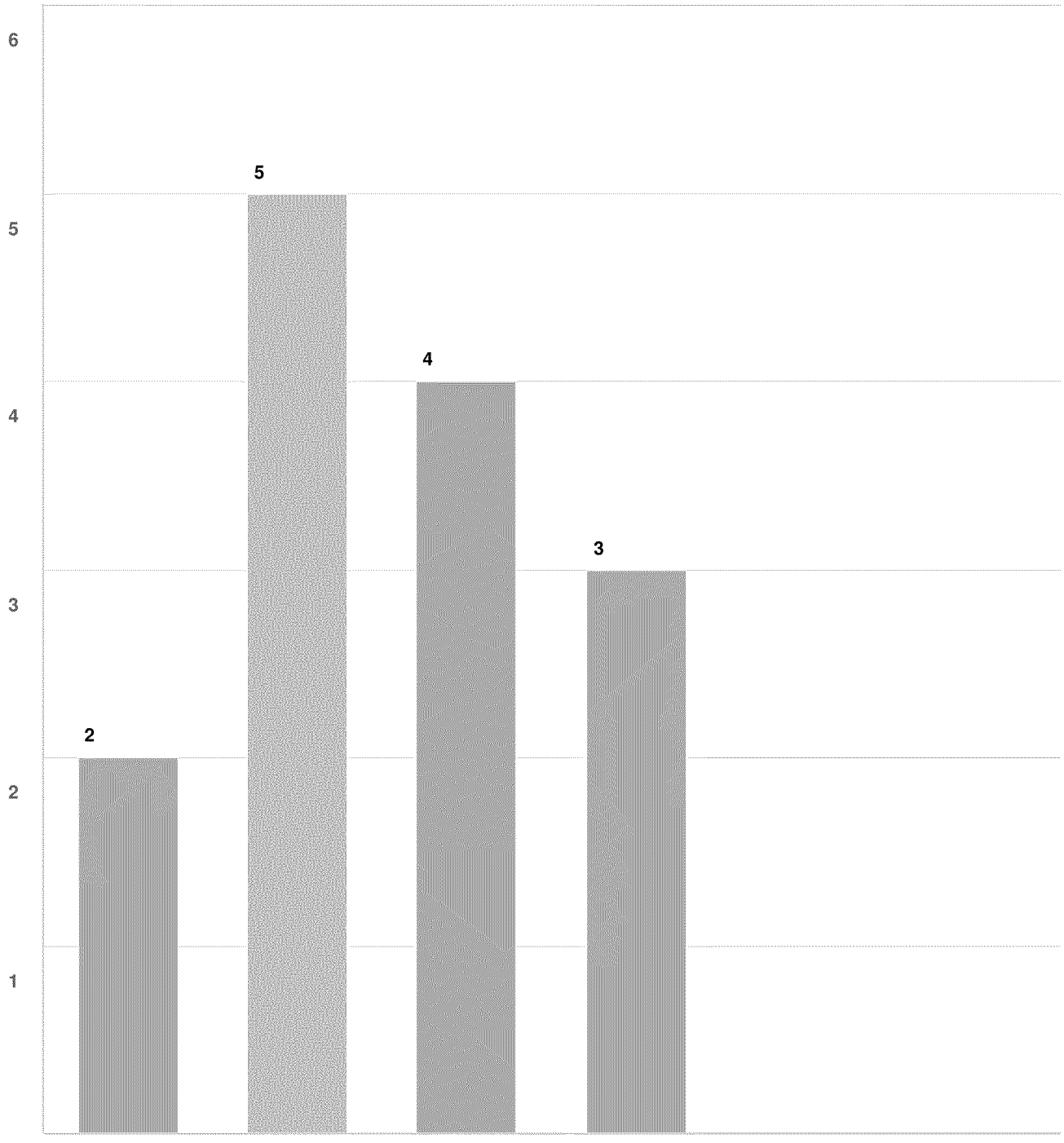


Question options

- ADA-accessible/universal design homes
- Manufactured homes
- Accessory Dwelling Units (ADU)
- Mixed-use (ground floor commercial with apartments above)
- Mid-scale multifamily (10+ units, including cottage courts, townhomes, apartments, condominiums, etc.)
- Small-scale multifamily (3-10 units, including triplexes, quads, cottage courts, townhomes, etc.).)
- Duplexes
- Single-family homes

Mandatory Question (7 response(s))
Question type: Checkbox Question

Q29 If you or your household were to move to Superior, which of the following housing size and layout options would you and your household be looking for and/or most interested in? (check all that apply)

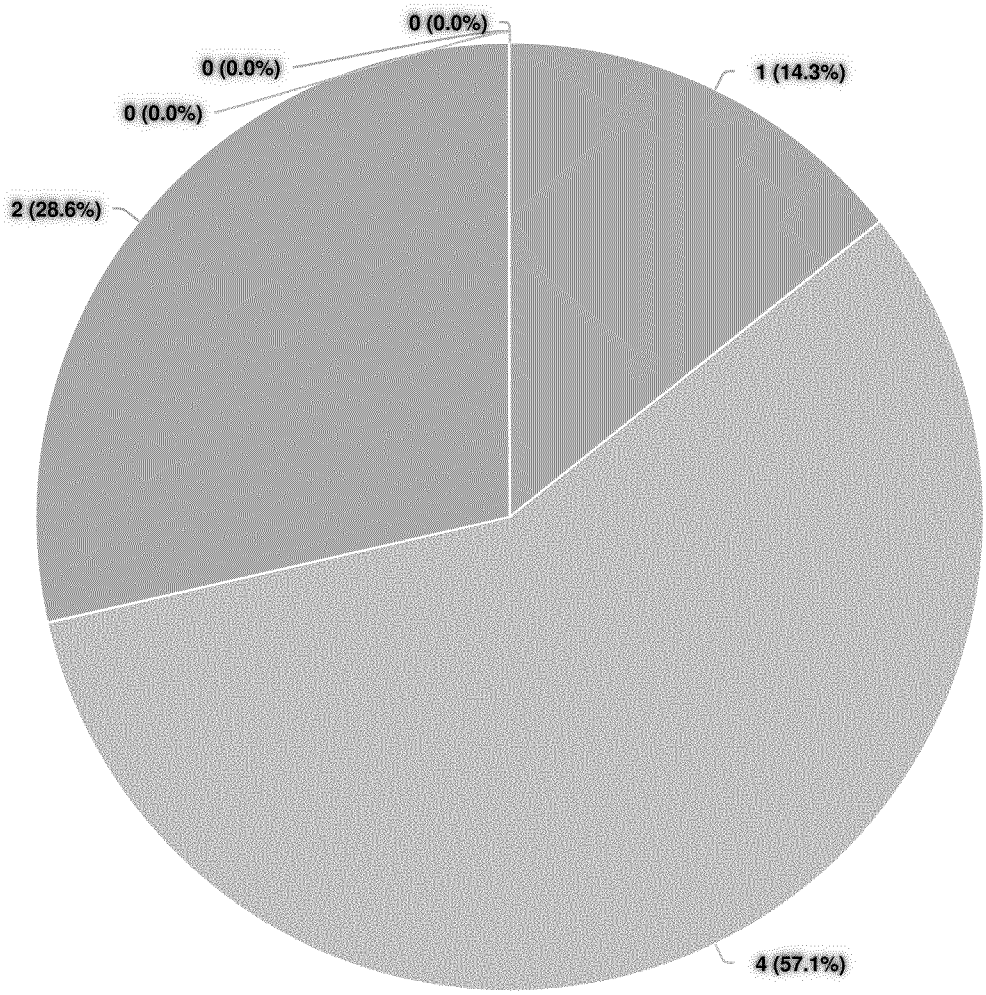


Question options

5+ bedroom units
Option 4
Multigenerational or cohousing (larger home, sometimes with multiple kitchens and/or entrances)
3-4-bedroom units
2-bedroom units
1-bedroom unit

Mandatory Question (7 response(s))
Question type: Checkbox Question

Q30 Which of the following best represents your annual household income?Note: We understand that this can be a sensitive topic and have made this question optional. We ask this question because it helps us understand household income trends across the ...

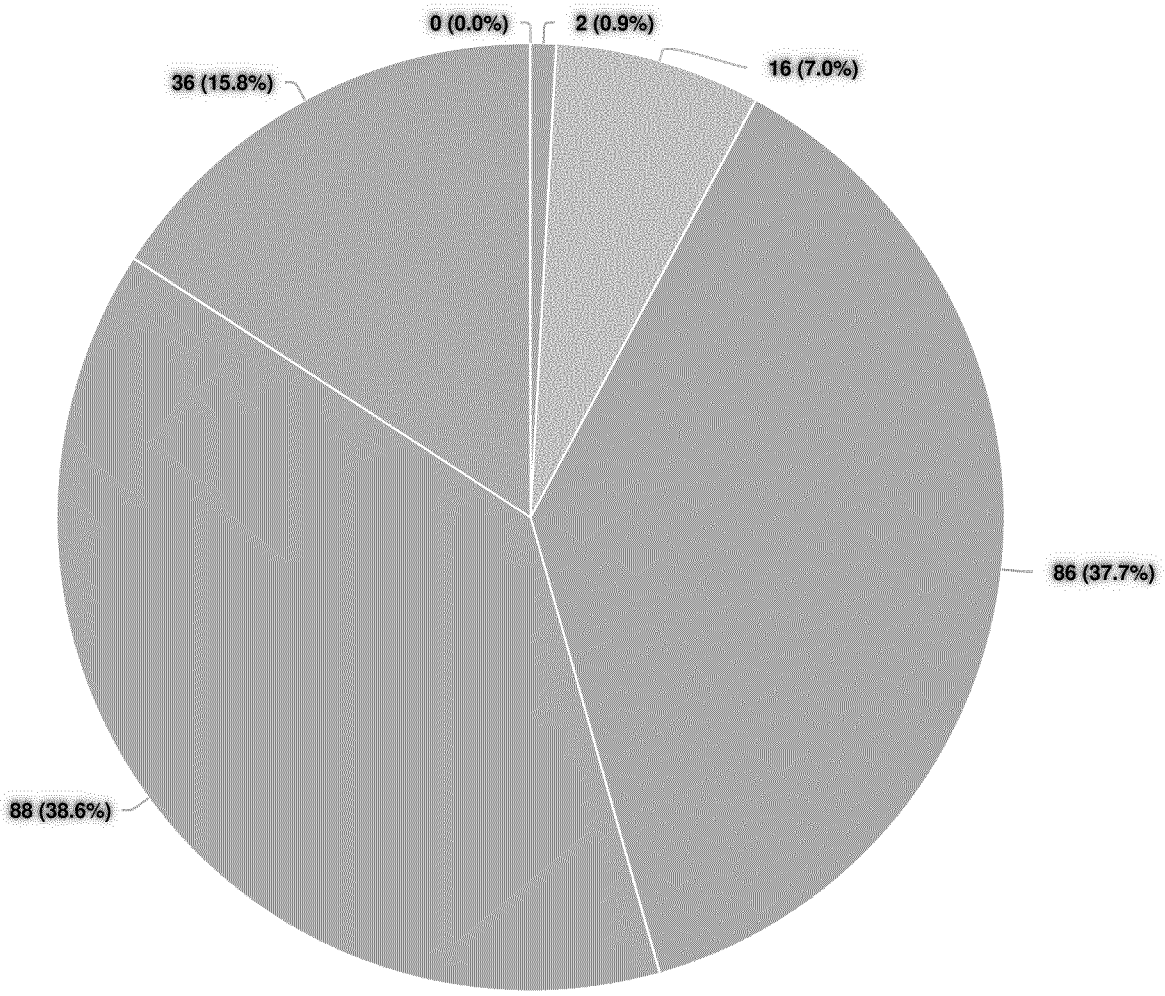


Question options

$173,000 + $144,000 to $173,000 $87,000 to $115,000 $115,000 to $144,000 $43,000 to $87,000 Up to $43,000

Optional question (7 response(s), 240 skipped)
Question type: Dropdown Question

Q31 What is your age?

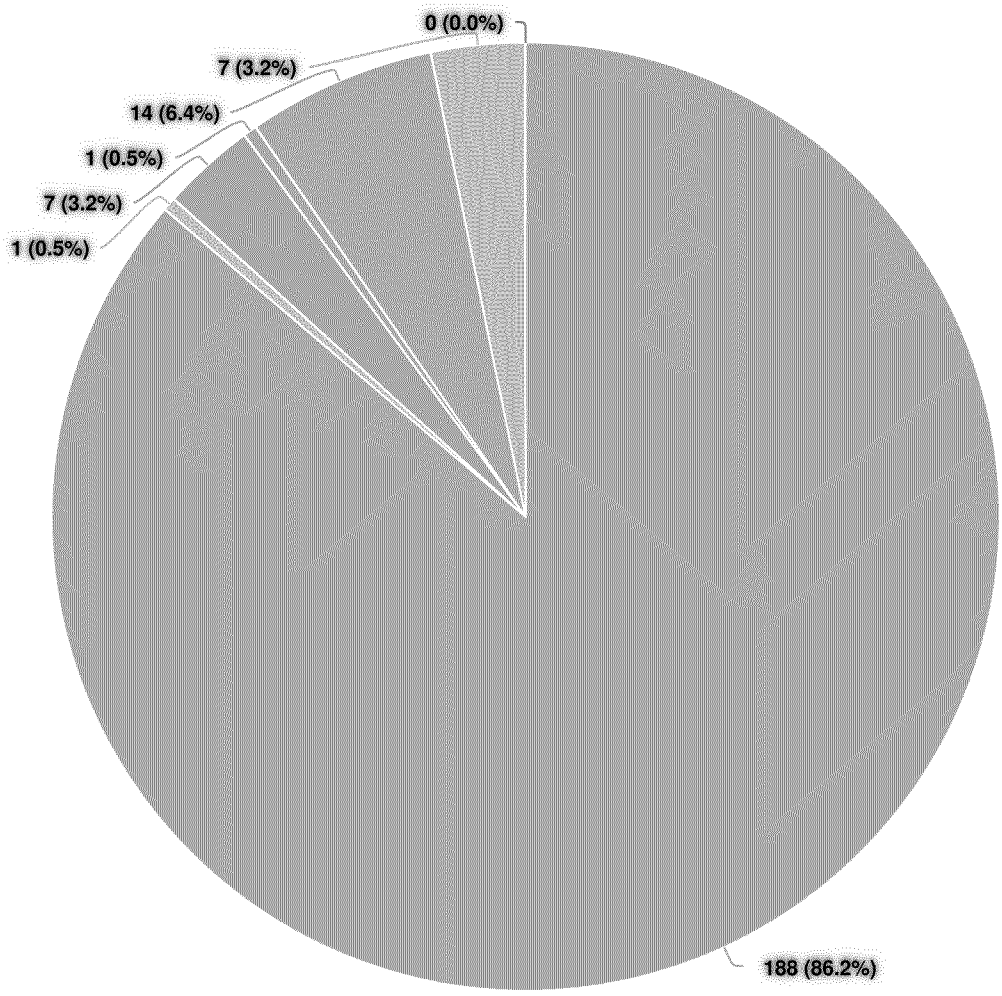


Question options

18 or younger | 65+ | 51 to 64 | 36 to 50 | 26 to 35 | 19 to 25

Optional question (228 response(s), 19 skipped)
Question type: Dropdown Question

Q32 What is your racial identity?

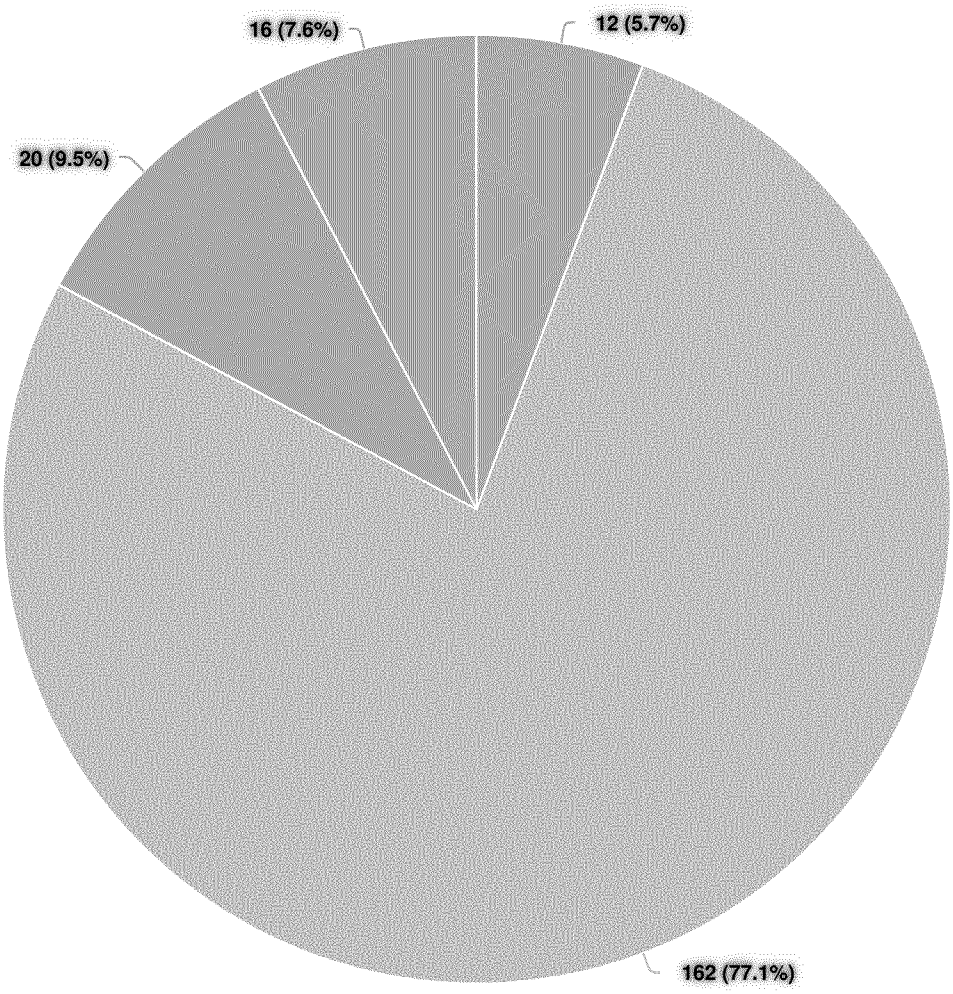


Question options

Pacific Islander | Other (please specify) | Mixed-Race | Alaska Native or American Indian | Asian | Black or African American | White

Optional question (218 response(s), 29 skipped)
Question type: Dropdown Question

Q33 What is your ethnic identity?



Question options

Other (please specify) Option 3 Non-Hispanic/Latinx Hispanic/Latinx

Optional question (210 response(s), 37 skipped)
Question type: Dropdown Question

Jack and Diane are a couple that live in Superior. Jack works in insurance and earns about $100k per year. Diane has owned a wellness and yoga studio for 10 years and earns about $40k per year. Jack and Diane have lived in Boulder County since college and bought their 4-bedroom home in Rock Creek in 2005 for $360k. They refinanced in 2019 in order to remodel and upgrade their windows.

Jack and Diane still have decent equity but rely on it to help their children pay for college. They have 25 years left on their refinanced mortgage, with a 3.5% interest rate. They can afford these payments currently but are hoping to downsize once their kids have graduated. With high-interest rates and increasing home prices, they are unsure whether they will be able to downsize within Superior.



Survey Responses

12 August 2019 - 01 July 2024

Jack and Diane

Shape Superior

Project: Housing Needs Assessment & Strategic Plan

BANG THE TABLE engagementHQ

VISITORS					
280					
CONTRIBUTORS			RESPONSES		
48			48		
0 Registered	0 Unverified	48 Anonymous	0 Registered	0 Unverified	48 Anonymous

Respondent No: 1
Login: Anonymous

Responded At: Feb 14, 2024 11:24:27 am
Last Seen: Feb 14, 2024 11:24:27 am

Q1. **What advice would you give Jack and Diane?**

Unfortunately, sell and move. There are less expensive options outside of Colorado. Plus, the elected officials in this state and town have no respect for the taxpayers. They look at us as a deep well of tax revenue.

Q2. **What could or should the Town do?**

Unfortunately there really is nothing to be done here. They can't seem to reduce things like the landscape fee. So if they can't tackle that easy one, there is no hope.

Respondent No: 2
Login: Anonymous

Responded At: Feb 14, 2024 11:35:00 am
Last Seen: Feb 14, 2024 11:35:00 am

Q1. **What advice would you give Jack and Diane?**

not answered

Q2. **What could or should the Town do?**

Build some one level open floor plan houses. These could be a little smaller than the typical Superior house and there for a little less expensive.

Respondent No: 3
Login: Anonymous

Responded At: Feb 14, 2024 11:47:38 am
Last Seen: Feb 14, 2024 11:47:38 am

Q1. **What advice would you give Jack and Diane?**

It's unfortunate that living in Boulder County is becoming increasingly expensive. Sadly, I advise figuring out a way to make more money, move to a less expensive town, or find a small home that costs less.

Q2. **What could or should the Town do?**

Allow for more development of houses.

Respondent No: 4
Login: Anonymous

Responded At: Feb 14, 2024 11:48:52 am
Last Seen: Feb 14, 2024 11:48:52 am

Q1. **What advice would you give Jack and Diane?**

Look elsewhere for downsizing, probably east of I-25 or somewhere outside of Colorado.

Q2. **What could or should the Town do?**

Nothing. That "train left the station" years ago with strict development and building code regulations, coupled with the cost of water taps, land values, and regional market factors beyond Superior's control, it's not possible to build a non-subsidized, reasonably sized house anywhere near Superior that has the same affordability that Superior had in 2005.

Respondent No: 5
Login: Anonymous

Responded At: Feb 14, 2024 11:49:16 am
Last Seen: Feb 14, 2024 11:49:16 am

Q1. **What advice would you give Jack and Diane?**

Stay in their home and enjoy it. College cost should be seriously considered. Is the cost of education worth the return on investment? The example above is a list of wants and not needs.

Q2. **What could or should the Town do?**

Nothing- this is not the government's responsibility.

Respondent No: 6
Login: Anonymous

Responded At: Feb 14, 2024 11:49:50 am
Last Seen: Feb 14, 2024 11:49:50 am

Q1. **What advice would you give Jack and Diane?**

Rather than downsize, rent rooms in their house to bring in extra cash. Don't pay off the mortgage sooner, as it's a great rate that they're unlikely to get in the future. The story didn't say how far away their kids are from graduating, but they should use the extra cash to save for a downpayment on a new house - and then when they are ready to downsize, keep the current home and rent it out in full, which should more than cover their mortgage and bring in additional income that can be used to subsidize the mortgage on the new house.

Q2. **What could or should the Town do?**

Don't block short term or long term rentals, which are often the only way for people to get out of these situations. Don't raise local mill levies, and find ways to trim down the current Town budget and give more money back to the residents. The current budget isn't bloated in any one place, but there are lots of little cuts that could be made to save money (e.g., stop catering dinners for the Board / committees) that overall would add up to be a lot.

Respondent No: 7
Login: Anonymous

Responded At: Feb 14, 2024 11:50:18 am
Last Seen: Feb 14, 2024 11:50:18 am

Q1. **What advice would you give Jack and Diane?**

Stay in your current house until interest rates drop. If you don't want to do that do to higher cost of utilities, potentially rent the current house and then look to rent a smaller home.

Q2. **What could or should the Town do?**

Let the free market play and do everything possible to lower mill rates to decrease property taxes. Reduce town staff like the art director and ranger to lower overall tax needs.

Respondent No: 8
Login: Anonymous

Responded At: Feb 14, 2024 11:55:09 am
Last Seen: Feb 14, 2024 11:55:09 am

Q1. **What advice would you give Jack and Diane?**

Sometimes in life we have to live with our choices. No one forced Jack and Diane to refinance their house to remodel. That was their choice. They reset a mortgage clock that was halfway completed. Most of us don't have unlimited money to do as we please in every situation. If they want to take advantage of the equity in their home, they should sell it. If they want to stay in Superior after doing so, they need to evaluate if doing so makes sense financially after paying for their children's college - which they also do not have to do. Paying for college is a nice gesture, a truly generous gift, but it's another choice that they need to weigh the benefits of before committing to it. This scenario is presented as some sort of sob story. It's not. They have a house in a desirable area that they can afford.

Q2. **What could or should the Town do?**

Nothing. The presentation of this case is spurious. Jack and Diane already own a home with a reasonable mortgage payment - there isn't a need to buy a new home and they are not "house cost burdened." No one is kicking them out of their house and thankfully they didn't lose their house in the Marshall Fire. If the town is so inclined as to facilitate affordable housing to help with housing access, great, but one person's "unaffordable" house is another person's equity. You're essentially asking if existing homeowners are willing to reduce the cost of a home they might sell. They aren't. Superior is a desirable place to live and the increase cost to live in the area reflect as much. I empathize with people who want to live in Superior (or any other area for that matter) but can't afford the housing costs, but I also know that many people in this area have worked exceptionally hard to be able to afford their homes. Artificially influencing the housing market is an insult to those folks.

Respondent No: 9
Login: Anonymous

Responded At: Feb 14, 2024 11:56:24 am
Last Seen: Feb 14, 2024 11:56:24 am

Q1. **What advice would you give Jack and Diane?**

Consider a HELOC as a line of credit on their home to assist with some projects to fix up their home; then when ready, list the home for sale and use proceeds to help fund college education for their kids while keeping enough for a down payment on their new home - OR insist the kids go to a local college and live at home to keep all expenses lower.

Q2. **What could or should the Town do?**

nothing really to do - the focus should be on helping first time home owners with an down payment assistance.

Respondent No: 10
Login: Anonymous
Responded At: Feb 14, 2024 11:59:00 am
Last Seen: Feb 14, 2024 11:59:00 am

Q1. **What advice would you give Jack and Diane?**

Maybe move to another state where housing is cheaper. They could then use the money from this house to pay college tuition. Get away from the airplane noise while they have a chance.

Q2. **What could or should the Town do?**

Not much can be done, housing is too expensive in Superior.

Respondent No: 11
Login: Anonymous
Responded At: Feb 14, 2024 11:59:27 am
Last Seen: Feb 14, 2024 11:59:27 am

Q1. **What advice would you give Jack and Diane?**

Stay where you are, even though you have good equity there are no smaller ranch houses under a million in superior, except for the tiny homes which are too small and ridiculously priced in the 600,000

Q2. **What could or should the Town do?**

Build ranch style homes, give priority to superior residents who live here and want to downsize and stay in the community we helped build.

Respondent No: 12
Login: Anonymous

Responded At: Feb 14, 2024 11:59:36 am
Last Seen: Feb 14, 2024 11:59:36 am

Q1. **What advice would you give Jack and Diane?**

Sell and downsize perhaps in another municipality with more reasonably priced homes.

Q2. **What could or should the Town do?**

Invest in or allow affordable housing.

Respondent No: 13
Login: Anonymous

Responded At: Feb 14, 2024 12:01:54 pm
Last Seen: Feb 14, 2024 12:01:54 pm

Q1. **What advice would you give Jack and Diane?**

Don’t rely on home equity. Encourage attending community college, trade school, Peace Corps, take a gap year & work/save $ If not already debt-free, make it your #1 priority

Q2. **What could or should the Town do?**

Should = Nothing Could = create “Superior Scholarships” for residents Lobby for free in-state college tuition Can you publicize the survey results?

Respondent No: 14
Login: Anonymous
Responded At: Feb 14, 2024 12:07:31 pm
Last Seen: Feb 14, 2024 12:07:31 pm

Q1. **What advice would you give Jack and Diane?**

move out of Boulder County. Ever increasing property tax and insurance costs not worth the cost to reside here in the future.

Q2. **What could or should the Town do?**

Not sure they can actually do much. Property tax mostly county and insurance regulates itself. Allow more shop top housing mixed use residential work with developers to make available smaller low maintenance sub $750k apartments. ADUs a step in the right direction.

Respondent No: 15
Login: Anonymous

Responded At: Feb 14, 2024 12:11:24 pm
Last Seen: Feb 14, 2024 12:11:24 pm

Q1. **What advice would you give Jack and Diane?**

silly to downsize in this case...stay as is for now

Q2. **What could or should the Town do?**

the town should do nothing

Respondent No: 16
Login: Anonymous

Responded At: Feb 14, 2024 12:29:08 pm
Last Seen: Feb 14, 2024 12:29:08 pm

Q1. **What advice would you give Jack and Diane?**

Focus on yourself and not your kids. Teach your kids some responsiblity and be a good financial steward.

Q2. **What could or should the Town do?**

I will lose my marbles if Superior starts using my tax dollars to pay for someone else's kids expenses. Make differnt life choices, it's noble you want to pay for your kids college but that is not how I grew up, or how my parents grew up. Have their kids take personal responsibility and put skin in the game for getting themselves through college. A reverse mortgage is a horrible way idea.

Respondent No: 17
Login: Anonymous

Responded At: Feb 14, 2024 12:29:25 pm
Last Seen: Feb 14, 2024 12:29:25 pm

Q1. **What advice would you give Jack and Diane?**

Be a voice and advocate for your needs.

Q2. **What could or should the Town do?**

Build more, age in place housing for middle and low income people, Make the communities neuro-diverse communities, where you can build community connections, to bring natural supports. Build in community space for people to gather and program can be had

Respondent No: 18
Login: Anonymous

Responded At: Feb 14, 2024 12:40:31 pm
Last Seen: Feb 14, 2024 12:40:31 pm

Q1. **What advice would you give Jack and Diane?**

Wait until kids graduate and hopefully interest rates will come down. Adverse care for ADU or basement dwelling and share space with a renter

Q2. **What could or should the Town do?**

Change housing building codes to permit dividing large residential space into smaller units and permit owner to earn additional income from renting said additional space.

Respondent No: 19
Login: Anonymous

Responded At: Feb 14, 2024 12:48:56 pm
Last Seen: Feb 14, 2024 12:48:56 pm

Q1. **What advice would you give Jack and Diane?**

Stick to your plan and be willing to move where you can get the home that meets your budget.

Q2. **What could or should the Town do?**

The Town should do absolutely nothing and has no business having anything to do with the free market. Honestly the question is absurd.

Respondent No: 20
Login: Anonymous

Responded At: Feb 14, 2024 12:58:00 pm
Last Seen: Feb 14, 2024 12:58:00 pm

Q1. **What advice would you give Jack and Diane?**

Sell the house immediately and with the decent equity that you have, purchase a smaller and more inexpensive house and pay cash for it! Having a ZERO mortgage interest is much better than having a 3.5% mortgage. This way, you won't have a mortgage payment and you can help your adult children more if that is really what you want. You have a combined income of $140,000 annually to live a great life. It seems that you are too invested in this house and don't want to let it go! It is just a house!! Sell it immediately! Also, with the money left, invest this money in a good mutual fund or purchase a rental property (pay cash for it! Don't borrow more money to purchase an investment) Cheers

Q2. **What could or should the Town do?**

In this case, there is really nothing the town should do. Cheers

Respondent No: 21
Login: Anonymous

Responded At: Feb 14, 2024 13:17:49 pm
Last Seen: Feb 14, 2024 13:17:49 pm

Q1. **What advice would you give Jack and Diane?**

Stay in the house. Or: Rent out the current house and purchase something smaller. They will not replicate that interest rate in today's market, and the rent will likely cover the mortgage for the original home, plus part of the mortgage for the new smaller home. Or: Move somewhere more affordable.

Q2. **What could or should the Town do?**

Nothing. People moved here because Superior is a model of the "American dream" - lots of open space and trails, mostly 2-story single family homes, amazing schools. Home prices have increased at the rate they have because it's a fantastic community. Government intervention would lead to market distortion, impact on property values, and cost to tax payers (if subsidies, tax breaks, financial support were utilized). There are plenty of close-by areas to downsize to. We'll face the same decision in 15 years, and that's part of living in this type of neighborhood.

Respondent No: 22
Login: Anonymous

Responded At: Feb 14, 2024 13:46:40 pm
Last Seen: Feb 14, 2024 13:46:40 pm

Q1. **What advice would you give Jack and Diane?**

Rent out our home and rent a townhome.

Q2. **What could or should the Town do?**

Townhouse rental prices in downtown Superior are higher than a mortgage payment...

Respondent No: 23
Login: Anonymous

Responded At: Feb 14, 2024 13:52:20 pm
Last Seen: Feb 14, 2024 13:52:20 pm

Q1. **What advice would you give Jack and Diane?**

Stick it out. Get a realtor and explore some homes in nearby areas where you can move after you retire.

Q2. **What could or should the Town do?**

The town could create some patio style homes for the aging population. Instead of multilevel, high end condos in DTS, or million dollar homes in Lantern's Lane, perhaps there could have been some lower cost options that are friendlier to aging adults.

Respondent No: 24
Login: Anonymous

Responded At: Feb 14, 2024 13:52:32 pm
Last Seen: Feb 14, 2024 13:52:32 pm

Q1. **What advice would you give Jack and Diane?**

Keep your house. Whatever smaller place you look at will most probably be more expensive than what you make on the sale of your house.

Q2. **What could or should the Town do?**

The town should have thought of building more ranch style homes for those of us who are aging at an affordable price before they decided to overbuild condos/apartments.

Respondent No: 25
Login: Anonymous

Responded At: Feb 14, 2024 14:30:46 pm
Last Seen: Feb 14, 2024 14:30:46 pm

Q1. **What advice would you give Jack and Diane?**

Stay put with your current mortgage. You don't have enough money to downsize in Superior, with prices and interest so high. Or move to another state. Colorado prices are ridiculous.

Q2. **What could or should the Town do?**

Do not raise property taxes. It is getting so that we can't afford to live in our houses! Right now, our property taxes are about 1/10th of our annual income. In my house, we have not received raises, one of us is out of work, and we are barely hanging on in a house that we bought 20 years ago.

Respondent No: 26
Login: Anonymous
Responded At: Feb 14, 2024 14:42:42 pm
Last Seen: Feb 14, 2024 14:42:42 pm

Q1. **What advice would you give Jack and Diane?**

Delay downsizing until interest rates go lower. Why would the concept of downsizing make any sense in this market when the payments are manageable now. Enjoy and be thankful for their larger home. If they are near or at the reverse mortgage age range, do a fixed rate reverse mortgage with the cash out option, paying taxes and insurance on there own. Use the cash as they deem appropriate. If they are not in the reverse mortgage age range they can take out a more expensive 2nd or they can assist their children on a monthly basis with any educational debts.

Q2. **What could or should the Town do?**

I don't believe the town should engage in any assistance programs by floating bonds or otherwise to the detriment of the rest of the residents in town. We all have sob stories which if looked at through fresh eyes can be a source of gratitude and thankfulness.

Respondent No: 27
Login: Anonymous

Responded At: Feb 14, 2024 14:54:07 pm
Last Seen: Feb 14, 2024 14:54:07 pm

Q1. **What advice would you give Jack and Diane?**

Look elsewhere to live. We didn't buy a home in Boulder when we moved here because we couldn't afford it.

Q2. **What could or should the Town do?**

Do NOT do affordable housing!! We left Houston to get away from this. Everyone else in town will be negatively impacted.

Respondent No: 28
Login: Anonymous

Responded At: Feb 14, 2024 15:15:14 pm
Last Seen: Feb 14, 2024 15:15:14 pm

Q1. **What advice would you give Jack and Diane?**

Find towns and housing they can afford outside of Superior.

Q2. **What could or should the Town do?**

The town should not do anything. The town isn't responsible for the housing market.

Respondent No: 29
Login: Anonymous

Responded At: Feb 14, 2024 15:29:51 pm
Last Seen: Feb 14, 2024 15:29:51 pm

Q1. **What advice would you give Jack and Diane?**

Downsize to what you can afford where you are willing to live.

Q2. **What could or should the Town do?**

Nothing

Respondent No: 30
Login: Anonymous

Responded At: Feb 14, 2024 15:59:11 pm
Last Seen: Feb 14, 2024 15:59:11 pm

Q1. **What advice would you give Jack and Diane?**

Good question. However, there are people in a much worse situation though & I feel this scenario doesn't fully represent the gravity of the housing situation here in Superior. There are families paying rent & May never be able to enjoy the benefits of homeownership in Superior. This in my opinion is a far worse situation than the scenario presented. Their options are keep the house, sell it & move to a more affordable state, get jobs making $181k, hope a family member leaves you some money when they pass, or the town creating an attainable housing for all income levels. Further, what about our kids how will they afford to live in the town they grew up?

Q2. **What could or should the Town do?**

Create an attainable housing systems that allows for people at every income level to purchase a home & live within their means. Purchase or donate land for this. Purchase existing homes & make them permanently affordable. Create revenue to be set aside for attainable housing. See if people would want to sell their home for under market rates. Create no or low interest home buying options programs. Collaborate with other cities to create attainable housing. Set aside remaining land in the city for attainable housing.

Respondent No: 31
Login: Anonymous
Responded At: Feb 14, 2024 17:45:07 pm
Last Seen: Feb 14, 2024 17:45:07 pm

Q1. **What advice would you give Jack and Diane?**

If was foolish to refinance your home in order to fund a home remodel project and depend on home equity to fund your child's education. At that stage in life a new 25 term mortgage was a poor financial decision & saving for your child's education should have been a priority. If you need to downsize you should be able to sell your large home at a premium & use the profits to cover a majority of your new home.

Q2. **What could or should the Town do?**

Nothing. This couple has the financial means to save and plan for the future. There are other areas within a 10-15 min radius that offers more affordable options if needed. I would prefer to live in other areas but this is what we can afford and we make financial sacrifices and budget to live here and plan for the future.

Respondent No: 32
Login: Anonymous
Responded At: Feb 14, 2024 18:21:04 pm
Last Seen: Feb 14, 2024 18:21:04 pm

Q1. **What advice would you give Jack and Diane?**

Enjoy being young and enjoy your family and the community.. Forget about downsizing..you can make that decision down the road and it isn't a necessity and is overrated...and if your house works now it will only increase in value and you will have lots of equity built up. Cut back on frivolous expenses and save where you can for college like in a 529 plan. Superior has some people with lots of money, but ignore that. somehow it all works out. Don't try to keep up with the "jone's". The trick is to play the government game and do planning -figuring out all the legal strategies for taxes etc. DO Planning. Buy more real estate to rent if you can. It will pay off in your future if you do it right. Seems sad if you can't live comfortable on 140000. Interest rates are still low historically. advice from a senior is that this isn't different than other years. People thought that $200000 was crazy to buy a house or before that $50000.. we all figured it out. Don't listen to the media "whoa is me".scenarios. That is how the media makes it's money. Education of finance is key.

Q2. **What could or should the Town do?**

Keep taxes low and get rid of all of the fees for every little thing such as a fee added to sales for a district or parking etc. Let the people live without so much government intervention. Don't add on fees for everything or make people pay for new infrastructure and building.. and quit allowing the high density building to continue which is so ugly and creates problems in density and traffic. Follow through to fix potholes etc and keep it a nice place to live.

Respondent No: 33
Login: Anonymous
Responded At: Feb 14, 2024 19:07:33 pm
Last Seen: Feb 14, 2024 19:07:33 pm

Q1. **What advice would you give Jack and Diane?**

Jack and Diane should either stay or move to somewhere they find affordable. I do not see how they wouldn't be able to downsize within superior however - the loan amount they'd be taking would be strictly less than what they have now, otherwise this isn't a downsizing. Other than a difference in interest rates, a downsizing will ALWAYS result in more free cash/less debt. This sounds like a flawed, disingenuous argument.

Q2. **What could or should the Town do?**

The town can't do much to decrease housing costs, other than: 1. Zoning for types of property whose total costs are lower (e.g., cheaper apartments as opposed to luxury apartments like in Downtown Superior. Seriously, Origin is extremely expensive). 2. Subsidizing housing prices using tax money, which I - as a resident - would prefer was spent on resident infrastructure such as a town-run rec center. 3. Placing restrictions on rent prices (which might drive landlords away - the Superior housing market is largely connected to various other towns like Broomfield, Louisville, Westminster, etc. With superior becoming the less economical option, landlords would be encouraged to leave). 4. Increase supply of housing - however, as mentioned above, Superior housing market is connected to surrounding areas. The supply would need to increase enough to dilute the market for the entire area, not just superior. 5. Discourage potential buyers/renters from living here. This could be done by reducing amenities or otherwise decreasing the perceived value of living here. I think it's obvious that existing residents would not like this. 6. Artificially limit who can buy/rent property in Superior (e.g., only allow local residents and their families to buy property in town). However, I am not sure if that is legal (I would hope it is not). The fact of the matter is that the cost of living in the denver metro area is rising. With increased mobility, we are seeing more wealthy people choosing to move to traditionally desirable places like the Front Range (while less desirable places, such as areas of the Midwest remain affordable). The local Superior market is connected with the surrounding areas (i.e., renters and buyers are not locked to superior, they will choose the best deal available across all surrounding towns), so there is very little that can be done by the town. Some ideas (e.g., increasing the general supply of housing in the area) could be achieved if cooperating with other towns/counties in the area, but with the extremely restrictive housing behavior of the city of Boulder (occupancy limits, building height limits, new construction limits, green belt, etc.), I find this very unlikely to work.

Respondent No: 34
Login: Anonymous

Responded At: Feb 14, 2024 19:09:01 pm
Last Seen: Feb 14, 2024 19:09:01 pm

Q1. **What advice would you give Jack and Diane?**

I am so annoyed that the town is spending money on this ridiculous survey. Our town cannot and should not be all things to all people. Stop wasting money doing things like this. Stop trying to find ways to legislate things that don't need to be legislated. Spend our money on more de-icer and proper plowing for the streets and redoing the aging landscape all over town.

Q2. **What could or should the Town do?**

The town should not even be worried and thinking about these things. This is NOT what you were elected to do. We don't want big government in our small town. Stop power tripping. If we wanted to live in Boulder, we would live there. I think the people who put this survey together should be fired.

Respondent No: 35
Login: Anonymous

Responded At: Feb 14, 2024 19:15:42 pm
Last Seen: Feb 14, 2024 19:15:42 pm

Q1. **What advice would you give Jack and Diane?**

Stay in your home until your kids are out of college and then sell and move out of Boulder County

Q2. **What could or should the Town do?**

Reduce property taxes so people can afford to stay in their homes.

Respondent No: 36
Login: Anonymous
Responded At: Feb 15, 2024 00:18:00 am
Last Seen: Feb 15, 2024 00:18:00 am

Q1. **What advice would you give Jack and Diane?**

Jack and Diane should keep doing what they are doing and pay off their mortgage before they retire. Downsizing would be very possible since they will own a paid for property in Superior they could convert to another property in town which would be at the same price level as the one they are selling.

Q2. **What could or should the Town do?**

The town should encourage economic development so people can make a living. Handouts are not for everyone.

Respondent No: 37
Login: Anonymous

Responded At: Feb 15, 2024 06:05:55 am
Last Seen: Feb 15, 2024 06:05:55 am

Q1. **What advice would you give Jack and Diane?**

Superior is not the be all/end all of places to live. You will have a lot more options once you downsize. Go explore.

Q2. **What could or should the Town do?**

Stop building apartments which lead to a decaying town. Instead build single family units that people can OWN rather than rent. Renters don't get the benefit of building wealth through home ownership. Low Income housing is not the answer as every (do some research) low income/government sponsored low income project becomes a problem.

Respondent No: 38
Login: Anonymous
Responded At: Feb 15, 2024 08:34:56 am
Last Seen: Feb 15, 2024 08:34:56 am

Q1. **What advice would you give Jack and Diane?**

With all of the new development there are now options beyond the big Rock Creek houses. Many apartments, townhomes and condos either on the market now or coming to market soon. Also, smaller 2 br houses now on the market in original town as well. So many options already available. Don't push to develop any more. Sometimes in life hard decisions have to be made and maybe Superior is no longer the answer. Also, with changes to the state laws re ADU's, maybe hold on to your property until they're mandated legal and build one, live in it and rent out your big RC house.

Q2. **What could or should the Town do?**

Allow ADU's, duh.

Respondent No: 39
Login: Anonymous

Responded At: Feb 15, 2024 09:02:50 am
Last Seen: Feb 15, 2024 09:02:50 am

Q1. **What advice would you give Jack and Diane?**

Seriously, an insurance professional who does not practice good financial planning! At 140K income it is unimaginable that you have not paid your mortgage off in 19 years! What are you spending your money on? Focus! Educate yourselves on how compound interest works, immediately, and teach your children before they fall into the same pattern that you have been living in. Sit as a family and audit your expenses like you are doing it for a job. Sit as a family and scour the resources for grants and scholarships to pay for school. Work study options. Part time jobs. Get the children involved in their future and model good financial planning for them. Focus! Create a s short, medium, and long term strategy and don't forget to include contingencies. Focus! Do the math! Let's just say $100,000 per year for 19 years is $1,900,000 ! WHERE HAS THE MONEY GONE!

Q2. **What could or should the Town do?**

Every town in the nation should be pushing for improving the educational system. Expose children from the earliest age to the trades, the arts, the sciences, and to critical thinking. Challenge them with problems to solve and supply them with the tools to solve those problems. Prepare the next generations for their future. If the city has resources and the populace has a receptiveness have classes, workshops, and advisors to help Jack and Diane's generation learn how to navigate today's world in a way that provides a better life for them and their children (and possibly their ageing parents) and to model behavior that will serve their children into their own adult lives. Educate and empower, don't enable bad behavior. This ship can be righted. If the will is there, the resources are easy.

Respondent No: 40
Login: Anonymous

Responded At: Feb 15, 2024 12:00:08 pm
Last Seen: Feb 15, 2024 12:00:08 pm

Q1. **What advice would you give Jack and Diane?**

I honestly don't feel sorry for Jack and Diane at all. They could sell their McMansion for over $1M and buy whatever they want.

Q2. **What could or should the Town do?**

I would like to see a different type of "affordable housing" approach - rather than a dense block of apartments in the shopping center (as has been proposed), smaller scale single family and tasteful multi-family (community oriented quads, etc.) are an approach that better aligns with Superior. The Wee Cottages in Rogers Farm are a good example of this. If you walk around in Shanahan Ridge or Bear Creek areas of south Boulder, you can see other nice examples of density done well.

Respondent No: 41
Login: Anonymous

Responded At: Feb 15, 2024 12:34:42 pm
Last Seen: Feb 15, 2024 12:34:42 pm

Q1. **What advice would you give Jack and Diane?**

Coming up with solutions based on a temporary problem, such as interest rates, is a fools game. Rates will normalize at some point, and mid-5's will likely be where we sit for some time. That said, there's no doubt home prices make it challenging for people to buy. There's so much that goes into the affordability of a home though. It's true payments are high, especially due to higher interest rates. However, it's the overall cost of homeownership that people are clued into. Our tax rates has gone up significantly in recent years. Our energy costs have gone up significantly. The HOA rates have gone up. Insurance rates have gone up. Home improvement items have gone up. When you couple these items with the day to day increases that the average family is also dealing with, more expensive groceries, cars have become unaffordable, recreation is so expensive people are opting out, govt fees and taxes have gone up on goods, and vehicles, tipping on everything, and so much more. The problem is that the consumer is being pinched at every possible opportunity in every possible way. With nearly stagnant wage growth, this is not an easily fixable problem. For Jack and Diane specifically, they should stay in the home with the low interest rate and continue to grow their equity so they have a means to help their children. Once the kids graduate, they should sell their home that has continued to appreciate (unless they live in Superior and their values continue to tank due to the airport - but that's a separate issue). At which point, they should take the equity gained and move to a place with a lower cost of living.

Q2. **What could or should the Town do?**

If the town is looking to add more affordable housing, they need to be real about all of the elements that make housing unaffordable. Permit fees, water tap fees, exterior requirements, energy code requirements. All of these elements cost tens of thousands more to the consumer. On top of that, the affordable solution is to build high density. With high density comes costly HOA fees, and typically a metro district which significantly increases the annual tax rate. All of those elements actually make it often more economical to pursue an existing single family home. That, in turn, drives up demand and therefore the cost of the home - once again putting pressure on affordability.

Respondent No: 42
Login: Anonymous

Responded At: Feb 15, 2024 13:58:54 pm
Last Seen: Feb 15, 2024 13:58:54 pm

Q1. **What advice would you give Jack and Diane?**

1) Keep working until you are ready to retire. 2) Rent out a room, short or long-term. 3) Sell your home and move elsewhere. 4) Rent your home short-term while renting property elsewhere.

Q2. **What could or should the Town do?**

1) Provide affordable housing for seniors (55+ communities), such as paired homes, small ranches, etc. 2) Allow households to rent out rooms short + long-term of their primary residence with no tax implications, such as reduced taxes, etc. 3) Allow short-term rentals of primary residence and reduced taxes.

Respondent No: 43
Login: Anonymous
Responded At: Feb 15, 2024 20:22:25 pm
Last Seen: Feb 15, 2024 20:22:25 pm

Q1. **What advice would you give Jack and Diane?**

Move. You'll never be able to afford to downsize in Superior without having to pay substantially more, which is the unfortunate situation may of us with kids in college or finishing college are discovering. It's very unfortunate that our town is pricing us out.

Q2. **What could or should the Town do?**

Commit to more affordable housing. EVERY single new build residential property that has gone up in Superior in the last 5 years is priced near $1M and many are priced well above that. Our own town is allowing developers to come in and price its own residents out of town. We can't even afford to relocate withing Rock Creek these days.

Respondent No: 44
Login: Anonymous

Responded At: Feb 17, 2024 12:35:30 pm
Last Seen: Feb 17, 2024 12:35:30 pm

Q1. **What advice would you give Jack and Diane?**

They probably would make a massive profit on their house if they sold it and there should be no concern about downsizing to a less expensive house.

Q2. **What could or should the Town do?**

If there are any restrictions on high density development, release them and allow developers to build more high density housing. Let the free market work. I think we should probably be more concerned about completely new homeowners. Due to long-standing zoning policies across America, previous generations have been able to turn housing into a lucrative investment at the expense of the current generation's wealth.

Respondent No: 45
Login: Anonymous

Responded At: Feb 21, 2024 15:43:25 pm
Last Seen: Feb 21, 2024 15:43:25 pm

Q1. **What advice would you give Jack and Diane?**

Superior is only one of many different suburbs in the Denver/Boulder metroplex and there are many smaller options in the nearby area if not right here in Superior. Superior doesn't need to cover all of the bases and have every possible option for every possible situation. Consider another nearby community if Superior doesn't have what you're looking for!

Q2. **What could or should the Town do?**

The town could, and probably will (despite what this survey will indicate) do something expensive to accommodate Jack and Diane. But I would hope they wouldn't do anything. This is what the free market is best at, if there is demand for this, it'll happen, if not, it won't. There are plenty of options nearby.

Respondent No: 46
Login: Anonymous

Responded At: Feb 25, 2024 11:09:49 am
Last Seen: Feb 25, 2024 11:09:49 am

Q1. **What advice would you give Jack and Diane?**

To Promote my Self!

Q2. **What could or should the Town do?**

If I should not gave a Payment from this!?

Respondent No: 47
Login: Anonymous

Responded At: Mar 02, 2024 09:08:25 am
Last Seen: Mar 02, 2024 09:08:25 am

Q1. **What advice would you give Jack and Diane?**

It's great you have a 3.5 percent mortgage but 25 years yet to pay and you seem to want to use your house as a ATM machine to help kids with college. Downsizing in Superior some year seems to be a pipe dream for you and a lot of us. If you want single a story home or you want to downsize your monthly payments you need to look somewhere else besides Boulder County.

Q2. **What could or should the Town do?**

I don't think the town has the space to build much once the new downtown is done and Toll's cigar homes and then 2 to 3 story townhomes seems to be all that is available. As I have said before, Boulder, Louisville, Lafayette and possibly Longmont and Erie need to jointly develop a plan for lower cost housing for seniors and people who live outside the area and commute in. If centralized would need more roads or dreaming of spoke and hub light rail and busses.

Respondent No: 48
Login: Anonymous

Responded At: Mar 11, 2024 09:39:11 am
Last Seen: Mar 11, 2024 09:39:11 am

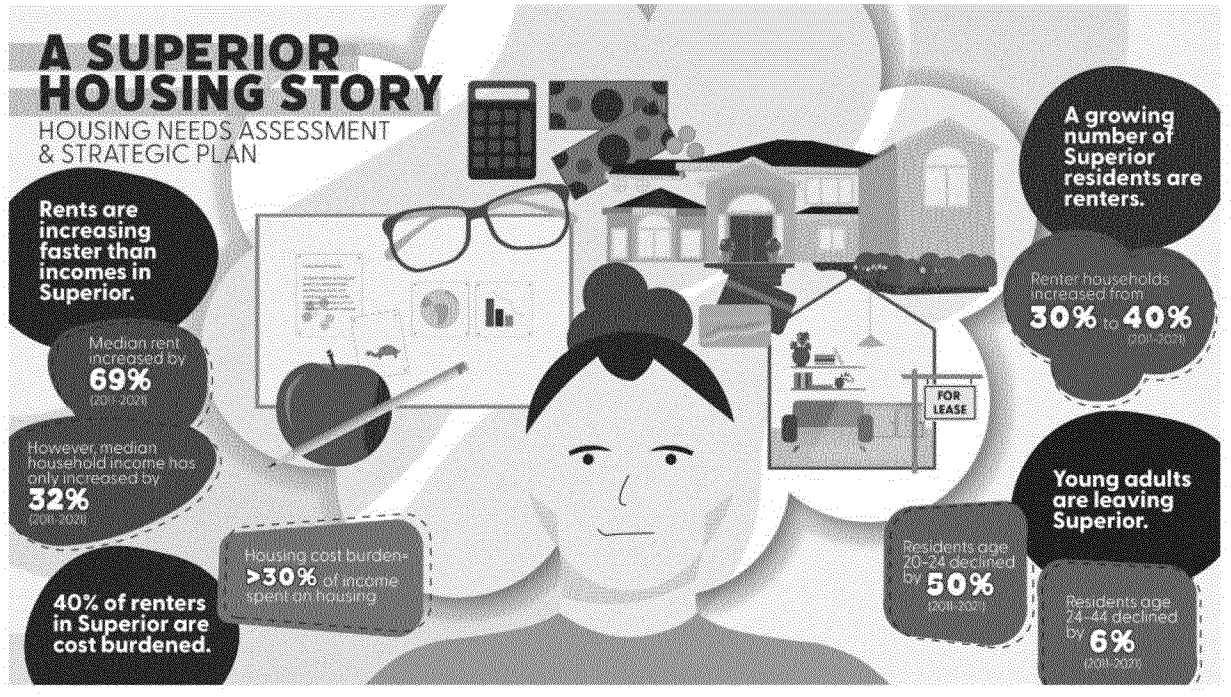
Q1. **What advice would you give Jack and Diane?**

Superior Colorado is a wonderful place to be "stuck" in. They should really appreciate the fact that they purchased an asset for $360k that is now likely worth around $1 million. They've experience something like $640k in appreciation. With their current earnings, they can easily afford the mortgage they have. They are in a really good position compared to the majority of Americans and should feel wonderful about it. If they want to downsize in the future, they could consider Downtown Superior. On the other hand, they could also move to any other town in America. And, the enormous value of their current home would allow them to buy a nice home in many less expensive areas. What a great position to be in!

Q2. **What could or should the Town do?**

Due to past good management of the Town and the fact that it is currently a great place to live, home values have dramatically appreciated for many owners who now find themselves very wealthy. This is not a bad thing. This is a good thing. The Town should continue to make Superior the best possible place to live and allow home prices to keep appreciating. Those who have invested here deserve it.

Jack and Diane have two kids. Tyler is 23 and graduated from CU Boulder last year. He just landed his first teaching job in Broomfield on a one-year, $40k contract. Because rents are high in Superior and across the Front Range, Tyler is living at home with his parents until he finds a housing option that is affordable to him. Samantha is 20 and going to school on a partial scholarship for music at Oberlin. Oberlin is quite expensive, so for now Samantha returns to Superior to live at home during school breaks.



Survey Responses

12 August 2019 - 01 July 2024

Tyler

Shape Superior

Project: Housing Needs Assessment & Strategic Plan



VISITORS					
157					
CONTRIBUTORS			RESPONSES		
48			48		
0	0	48	0	0	48
Registered	Unverified	Anonymous	Registered	Unverified	Anonymous

Respondent No: 1
Login: Anonymous
Email: n/a

Responded At: Feb 08, 2024 14:17:09 pm
Last Seen: Feb 08, 2024 14:17:09 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Test

Q2. **What could or should the Town do?**

Test

Q3. **Share your housing story.**

not answered

Respondent No: 2
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 11:28:54 am
Last Seen: Feb 14, 2024 11:28:54 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Suggest he move close by to Lafayette or Broomfield which is more affordable.

Q2. **What could or should the Town do?**

Nothing.

Q3. **Share your housing story.**

not answered

Respondent No: 3
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 11:54:58 am
Last Seen: Feb 14, 2024 11:54:58 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Tyler should continue to live with Jack and Diane while it's feasible. If Jack and Diane are comfortable with it, Jack can skip paying rent but contribute to groceries and utilities. However, he should plan his budget so that he is saving market rent every month. This will give him a nest egg, and also prepare him so that if/when Jack and Diane are unable to keep supporting him, it's an easier transition to paying rent on his own.

Q2. **What could or should the Town do?**

Nothing needed from the town. Maybe start offering programming for young adults rather than just things aimed at families with little kids.

Q3. **Share your housing story.**

not answered

Respondent No: 4
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 12:12:36 pm
Last Seen: Feb 14, 2024 12:12:36 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

buy a home in a more affordable area. superior isn't for everyone

Q2. **What could or should the Town do?**

NOTHING

Q3. **Share your housing story.**

not answered

Respondent No:	5	**Responded At:**	Feb 14, 2024 12:46:08 pm
Login:	Anonymous	**Last Seen:**	Feb 14, 2024 12:46:08 pm
Email:	n/a	**IP Address:**	n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Help him find lower cost housing in Broomfield, closer to his job; Superior just is too expensive for young adults starting out or being in their early careers, especially if they are single.

Q2. **What could or should the Town do?**

allow for low-income or affordable housing options, build in within the community - allow for some of the new development (ie. 20% is standard in other cities) to be low/affordable and rental rate locked;

Q3. **Share your housing story.**

not answered

Respondent No: 6
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 12:53:45 pm
Last Seen: Feb 14, 2024 12:53:45 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Tyler needs to establish credit in order to qualify for best interest rate when he is ready to purchase his own home. J&D should advocate housing permit changes from single-family to single family +1 or +2. Remodel their basement as separate-residential property and charge Tyler rent.

Q2. **What could or should the Town do?**

Change residential zoning to accommodate extended families living separately within same propertt

Q3. **Share your housing story.**

not answered

Respondent No: 7
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 15:01:29 pm
Last Seen: Feb 14, 2024 15:01:29 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

not answered

Q2. **What could or should the Town do?**

Do NOT do affordable housing. Individuals can look elsewhere for housing. We moved from Houston to get away from this. Everyone else in the community will suffer.

Q3. **Share your housing story.**

not answered

Respondent No: 8
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 15:21:14 pm
Last Seen: Feb 14, 2024 15:21:14 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Tyler should get roommates and share the costs. I lived in the 3rd largest city in my 20's and was completely on my own financially. I got as many roommates as I needed to to be able to afford my living situation.

Q2. **What could or should the Town do?**

The town should do nothing. The housing market is not their responsibility.

Q3. **Share your housing story.**

not answered

Respondent No: 9
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 15:33:29 pm
Last Seen: Feb 14, 2024 15:33:29 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Charge Tyler rent. Encourage him to find roommates to split housing costs with.

Q2. **What could or should the Town do?**

Nothing

Q3. **Share your housing story.**

not answered

Respondent No: 10
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 19:17:53 pm
Last Seen: Feb 14, 2024 19:17:53 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Stay home as long as you can

Q2. **What could or should the Town do?**

Provide affordable housing options for teachers and other public workers in the community where they work. To qualify, renters must work.in the boundaries of Superior or Louisville in public service.

Q3. **Share your housing story.**

not answered

Respondent No:	11	**Responded At:**	Feb 15, 2024 06:10:13 am
Login:	Anonymous	**Last Seen:**	Feb 15, 2024 06:10:13 am
Email:	n/a	**IP Address:**	n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Go out to the fringes...Berthoud, etc and BUY a house. Commute until you can move if you still want to. Remember, at one point everything east of Havana street, south of Hamden and north of Broomfield was "way out there".

Q2. **What could or should the Town do?**

Stop building apartments. Do not build low/moderate income houses. Those two actions hurt the people who have worked hard to be able to afford Superior. Superior is not Aspen or Beverly Hills. It's a small town that has become popular by being near Boulder. Don't penalize people who were/are able to buy a home here.

Q3. **Share your housing story.**

not answered

Respondent No: 12
Login: Anonymous
Email: n/a

Responded At: Feb 15, 2024 08:42:50 am
Last Seen: Feb 15, 2024 08:42:50 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Keep on keeping on. We're in this exact same boat and it's working fine. No reason for an empty bedroom in a big Rock Creek house to go to waste. He'll get to the point where he can afford some place and he'll do it a lot faster in this situation than if he was renting an apartment

Q2. **What could or should the Town do?**

Absolutely nothing. This family has made financial decisions. Why should anyone else subsidize them? This is not a situation that the town should act to change

Q3. **Share your housing story.**

not answered

Respondent No: 13
Login: Anonymous
Email: n/a

Responded At: Feb 20, 2024 09:00:06 am
Last Seen: Feb 20, 2024 09:00:06 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Jack, Diane, and Tyler don't need advice; housing costs need to come down. Tyler and Samantha have been economically crippled by inflation, student loan debt, and stagnant wages. A degree and a teaching job shouldn't earn a person a meager $40k ; teachers should be paid a living salary. Tyler lives at home with his parents because statistically speaking, Boomers have the most cumulative wealth whereas Gen Z and millennials have the least amount of generational wealth in history. I would advise Jack & Diane to vote for legislation that supports affordable housing for all. Stop blaming young people living at home for the state of the economy. Also, multi generational living has been a common practice among cultures for centuries. Only in the US, where capitalism Reigns supreme, did we invent the idea of moving out at 18 so "ten family members pay 10 rents" it's insulting to ask us what advice we would give when this situation isn't a personal moral failing on behalf of Tyler. Tyler lives in a dumpster fire of an economy that robbed him of his economic future in favor of the ultra wealthy. His parents don't understand the privilege of owning a house; something Tyler & Samantha aren't even allowed to dream of right now due to the cost of housing.

Q2. **What could or should the Town do?**

The town needs to push for legislation that controls Rent & housing costs. The town needs to put an immediate cap on Rent. Housing is astronomical and the apartments in Superior that claim to be luxury are mostly price gouging on false claims. You Absolutely Do Not Need more "luxury apartments." Plus, all this new housing is blocking the Mountain View's landlords charge so much money for. Do you know the Bell Flatirons can barely keep up with its own maintenance? When I Lived there, All my windows leaked air & water (yes I told them) & they still increased my rent and never fixed a thing. Literal Nothing changed in the town or my apartment in 2 years, but rent went up $200. Even after we evacuated indefinitely for the Marshall Fire we were given absolutely no recourse and still expected to pay rent on time; even if affected by the fire. Is anyone going to maybe check the shady, greedy, practices of Landlords? They raise rent without explanation or justification meanwhile no one's wages change. If you try to negotiate rent they tell you "that's the going rate" because every other guy in town can charge that much, so they do too, even if there's no actual value to justify such an astronomical cost. The town needs to vocally support practices that either encourage higher wages or encourage lower housing costs. Preferably Both. I can't even rent a single family home in the Broomfield/Superior for less than $2500; and 1& 2 bedroom apartments in the area go for roughly the same. I'm a teacher for this areas schools but I can't afford to live in this area. Make it make sense. Also, how is anyone supposed to work at the local Walmart, Sonic, the Flatirons Mall, any of the fast food restaurants and live in Superior/ Broomfield at the same time? The average rent in the area is close to $2k; and we all know those establishments don't pay a living wage. Is the Superior Taco Bell worker supposed to commute over 30 minutes from a cheaper city? How is it cheaper if they now have commuting costs? Wouldn't you just work someplace closer? The housing costs are pricing people out of the city, the same people that you need to work basic retail jobs like Popeyes, Chik-Fil-A, Safeway, Target, and the gas stations. These Stores bring lots of traffic into downtown Superior, but if the people who work there can't afford to live nearby, it causes a labor shortage- which we are seeing at many under staffed local businesses. None of the problems of your fictional characters exist in a vacuum. Working harder isn't a solution in a broken system. The onus isn't on the individual; it's on the elected representatives to do the right thing for their people and create policies that reflect their wants and needs.

Q3. **Share your housing story.**

not answered

Respondent No: 14
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:07:38 pm
Last Seen: Feb 21, 2024 15:07:38 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

1. Get a better paying job. 2. Move to a location you can afford. Superior is not for you. 3. Life is tough, and full of tough choices. It makes you stronger. Don't be such a softy.

Q2. **What could or should the Town do?**

ABSOULTELY NOTHING! What the heck do you think a government entity can do? Put Housing Cost caps on residential sales? Have rent-control restrictions? Are you guys serious??!! Have you ever done any research on housing projects that are "government controlled"?? Have you not take and basic course in economics? How about stepping back, and realizing that this is America, it's a Capitalist societly and the free-market is best and strongest in the absence of any government. You people make me so mad at living here....

Q3. **Share your housing story.**

We bought a house we could afford...it has gone up in value. We are happy. End of story.

Respondent No: 15
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:08:57 pm
Last Seen: Feb 21, 2024 15:08:57 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

I have two sons who will be in the same position and my position is to allow Tyler to stay and home - contribute a fixed amount to bills from his salary and save the rest for a deposit.

Q2. **What could or should the Town do?**

We need high quality, low cost rent to buy solutions for the young adults in our community means tested. We have so many renters in Superior I'm sure that's pushing up the rental costs. You should ask the young under 30 somethings what they need for a housing solution and their town to not only help them move on with their lives but potentially stay in this community.

Q3. **Share your housing story.**

I bought probably higher that I should have but used money from my father's estate as a deposit for my house here. I was blessed by the first time purchasers credit under Obama as I'm an expat with zero credit score here. I now could not afford to move from where I am so thank god I bought when I did. I don't think my sons who are at college at MSU (low cost solution) will be leaving any time soon and I'm okay with that as they are not going to be starting their working lives with huge student loans either

Respondent No: 16
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:14:46 pm
Last Seen: Feb 21, 2024 15:14:46 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

He can live at home as long as he pays rent. Save the rent invest it and return it to him when he is ready to buy his own home. They have special housing for low income earners / teachers.

Q2. **What could or should the Town do?**

Consider providing subsidized low income housing for teachers and other city employees if they want to attract talented teachers/ employees.

Q3. **Share your housing story.**

I went to college got a job worked hard, got married and purchased a house as soon as we could qualify.



Respondent No: 17
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:16:22 pm
Last Seen: Feb 21, 2024 15:16:22 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Tyler should continue doing what he is doing and look for a roommate for a 2 bedroom apartment in Broomfield or Westminster.

Q2. **What could or should the Town do?**

Nothing

Q3. **Share your housing story.**

We got married, and with two incomes we saved for a down payment by not having fun or going on vacations because that's what was important. Then we continued to not spend and instead aggressively paid off our mortgage until we had enough equity to buy a larger home. We continued to not splurge and instead paid off our mortgage by age 36. It takes sacrifice to afford you home you want, not government intervention.

Respondent No: 18
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:20:40 pm
Last Seen: Feb 21, 2024 15:20:40 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Tyler should find somewhere else to live. We don't want cheap housing here to bring lower class people and lower property values and drive up crime.

Q2. **What could or should the Town do?**

Nothing. Too bad for Tyler. Not everyone can live here.

Q3. **Share your housing story.**

I want to keep crime low and property values high.

Respondent No: 19
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:22:06 pm
Last Seen: Feb 21, 2024 15:22:06 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

I'd tell them to let Tyler stay there for 1 year rent free as long as he is saving that money, but after that he needs to either find a place with a few roommates or get a job somewhere else. Or a second job. Seriously is 40K all teaching pays? My kid made more than that per hour working fast food.

Q2. **What could or should the Town do?**

Nothing

Q3. **Share your housing story.**

Have 3 kids in college, 2 out of state. Encouraging them to choose a career that they can afford rent. Waiting till they graduate and see where they end up, likely not back in Colorado due to affordability, before we choose where to retire.

Respondent No: 20
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:34:25 pm
Last Seen: Feb 21, 2024 15:34:25 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Stay living at home and save as much money as you can. High interest savings account or IRA. Not a regular saving account.

Q2. **What could or should the Town do?**

Encourage & allow ADU's everywhere.

Q3. **Share your housing story.**

n/a

Respondent No: 21
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:35:12 pm
Last Seen: Feb 21, 2024 15:35:12 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Tyler is making a smart financial decision by living with his parents. The other option would be to live somewhere with roommates - this is very typical for someone right out of college. Either way, his parents should help him come up with strategies to save money to afford a down payment on a house that he can afford in a few years. He will likely still need roommates or a partner that is also working.

Q2. **What could or should the Town do?**

Offer classes on smart financial decision making and investments.

Q3. **Share your housing story.**

Buy where and what you can afford.

Respondent No: 22
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:49:35 pm
Last Seen: Feb 21, 2024 15:49:35 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

The rest of the world often has multiple generations living in one home. It is a purely American notion that generations have to live apart in their own places. My advice would be to have Tyler live at home until he can afford a down payment on his own place. There are affordable places in Broomfield.

Q2. **What could or should the Town do?**

Nothing. Don't impose on anyone else's freedoms or tax them extra to accommodate Tyler's situation.

Q3. **Share your housing story.**

Saved up some money in my twenties, married my wife who'd done the same, bought a little house and continued to save, outgrew the little house, moved to Superior, raised 3 kids here who are doing the same and will probably own a house before the age their parents did. You know, responsible stuff



Respondent No: 23
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:49:38 pm
Last Seen: Feb 21, 2024 15:49:38 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

At 23, this country believes this age group is taken care of by their parents. Tyler can still be on his parents insurance, and is considered to be a dependent. Give him a room in your home, or have him get a roommate in an apartment.

Q2. **What could or should the Town do?**

The town could have a housing authority to help with finding roommates? Perhaps a discounted interest rate for first time homeowners who are lower income earners?

Q3. **Share your housing story.**

I have never had my own place. I have had several roommates until my partner and I purchased a home, and even then, we had two roommates to help with the costs. I was fortunate to receive special bond money in Boulder to purchase our first home. It only required a 10% deposit, and a reduced interest rate of 14%, instead of 18% in 1983. Easily spent over 30% of our income on housing for our 1300 sq ft home.

Respondent No: 24
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:52:46 pm
Last Seen: Feb 21, 2024 15:52:46 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Let him keep living at home to save money.

Q2. **What could or should the Town do?**

Densify Superior along the 36 corridor. Allow more apartments and townhomes to be built in the giant parking lots of Superior Marketplace. Minimize surface parking to allow for walkable density. Work with Louisville to build apartments/townhomes in the giant parking lots on their side of 36. Get rid of requirements that townhomes need to have offstreet parking requirements based on size.

Q3. **Share your housing story.**

Family of 5 living in a townhome due to housing costs. Would be open to a larger townhome (4 bedroom, 3,000 SF), but they're restricted by off street parking requirements.

Respondent No: 25
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:53:56 pm
Last Seen: Feb 21, 2024 15:53:56 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Living at home is fine to save $ for future down payment. I would define timeline and savings requirements though for Tyler in order to live in house, e.g. he must put 30% of his pay away in savings much like a mortgage would take.

Q2. **What could or should the Town do?**

Enact policy against speculative or corporate ownership of area homes. Limit ownership to 2x per family (where one must be resided in by primary owner). There are plenty of corporate bought houses being used as rentals...you want affordability, get rid of these speculative buys which remove inventory permanently.

Q3. **Share your housing story.**

not answered

Respondent No: 26
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 16:43:01 pm
Last Seen: Feb 21, 2024 16:43:01 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Show him how to save money so he can afford to buy a first home. Colorado, especially Superior, are desirable places to live. Because there is a large demand, prices will be higher. Cut costs in your life and focus on saving for a down payment.

Q2. **What could or should the Town do?**

ABSOLUTELY NOTHING. The town needs to fix roads and amenities and not get in the rent subsidizing business.

Q3. **Share your housing story.**

I graduated college and lived in a small, lower rent apartment while saving money. After a year of evaluating wants vs needs, I was able to get enough money saved to get a FHA loan and put 6% down on a home. We continued to make tough choices on what we spent our money on and eventually ended up in our dream home in Superior. We didn't expect to live in our ideal situation 6 months out of college, and neither should these kids.

Respondent No: 27
Login: Anonymous
Email: n/a
Responded At: Feb 21, 2024 17:38:07 pm
Last Seen: Feb 21, 2024 17:38:07 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

They should encourage Tyler to immediately begin a savings plan to start building a down payment for a home to invest in. Obviously this will take time -likely a few years at least on a teacher's salary. In the meantime, they should continue to support Tyler by welcoming him back into their home, possibly charging a small rent to teach Tyler the value of money, and what a privilege it is that he was able to grow up in such a nice town - a privilege he did nothing to earn, and is rather, due to the hard work of his parents. Tyler could also actively seek out potential roommates that could share the financial burden of the apartment.

Q2. **What could or should the Town do?**

The town should continue to make wise decisions to protect Tyler's parents' sizable investment of purchasing a house in Superior.

Q3. **Share your housing story.**

We worked hard and saved until we were eventually in the financial position to afford a house in Superior. This happened in our 30s...not at 23. Before that, we had to live *gasp* outside of Boulder County.

Respondent No: 28
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 17:40:21 pm
Last Seen: Feb 21, 2024 17:40:21 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Suggest that Tyler find a roommate, room for rent, or apartment within a 10 mile radius (Westminster, Thornton, Broomfield, etc) that fits his budget. Once Tyler is older, further into his career, and earns a higher income he can evaluate options that fit his budget.

Q2. **What could or should the Town do?**

Nothing. Superior is a very small town and there are more affordable options within a 10 mile radius in larger towns for someone just starting their career.

Q3. **Share your housing story.**

not answered

Respondent No: 29
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 18:20:40 pm
Last Seen: Feb 21, 2024 18:20:40 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Stay at home with your parents and save money until you can finally afford to rent.

Q2. **What could or should the Town do?**

Change the rental housing rules to allow 5 or 6 roommates to rent one house, rather than just 3 unrelated roommates.

Q3. **Share your housing story.**

My kids are in the same boat. They can't afford to rent unless the rental-$- per-person comes down, but rental owners can't reduce their rates because they have to cover their mortgage payments, which are also huge. Allowing more renters in a house reduces the rate/renter.

Respondent No: 30
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 18:59:32 pm
Last Seen: Feb 21, 2024 18:59:32 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

I don't see the problem. Let Tyler continue living with you while he saves money to rent a place of his own. This is the norm today. Also he doesn't know where he'll land after his one year contract is up.

Q2. **What could or should the Town do?**

Nothing. Not everyone can afford to live in Boulder County. There are cheaper options in neighboring areas. This is not the town's issue. Superior has actually done an admirable job offering different housing options with the development of the downtown area.

Q3. **Share your housing story.**

not answered

Respondent No: 31
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 19:36:44 pm
Last Seen: Feb 21, 2024 19:36:44 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

To live at home as long as he can and save as much as he can.

Q2. **What could or should the Town do?**

not answered

Q3. **Share your housing story.**

I grew up in the 80027. I'm 38yrs old and this is the only zip code I have ever lived in. I'm recently divorced and have sole custody of my 2 teenage kids. And like "Tyler" I am now living back home with my parents. I work as a special education para for BVSD and my paycheck is barely enough for grocery's and my kids needs. Being able to afford rent in the area that I love and have lived in my whole life, feels like a pipe dream. Even the options for low income housing are out of reach for me without help and assistance. I feel like I'm digging myself out of a never ending pit.

Respondent No: 32
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 19:45:54 pm
Last Seen: Feb 21, 2024 19:45:54 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Tyler, the adult whose parents no longer make decisions for him, should look in Broomfield - thousands of apartments, right on 36, closer to work, save time and money! Broomfield has tons of young professionals so he will find more people his age to hang out with, more bars, restaurants, movie theaters and closer to the Denver nightlife! Or continue to live at home like the majority of young adults around the country, it's smart and fun for Jack and Diane, no need to hire a dog sitter when traveling! But you do know it's really not Jack and Diane's issue, Tyler is an adult and can do what ever he wants. Young adults SHOULD leave Superior!

Q2. **What could or should the Town do?**

Section off a building in Downtown for affordable housing. Oh noooo too late? Too bad. If you are renting in Superior you obviously don't need affordable housing. If you are renting in Superior and are cost burdened, you make bad choices. There is no economical reason to live in Superior as there is no industry here, (maybe we should get that?) you are only going to live here because you CAN afford it. And you think rent is bad now? Just wait until we get our new tax bills. We will all need assistance with our housing. Why don't you focus on that?

Q3. **Share your housing story.**

One of my young adults is living with us, because he wants to and we all love it. See the dog sitting above. The other is in the mountains living in a dump with multiple roommates and working to pay for it, because that's what he wants to do. Superior is a tiny, four mile town, that is basically full, maxed out. There is plenty of 'affordable' housing in Broomfield and Westminster. The town really should have thought about this affordable housing need when you agreed to the 1000 apartments in our new downtown. No young adult wants to live here, they want to be where people their ages are, not their parent's ages. Superior will never turn into a ghost town; families, working middle aged, and retirees will always choose to live here. It's fabulous, don't ruin it by over building. Superior is built out - stop the madness! Stop trying to make FETCH happen!

Respondent No: 33
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 20:27:07 pm
Last Seen: Feb 21, 2024 20:27:07 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Jack and Diane should encourage Tyler to stay at home and save his money until he is better able to move out on his own. They could also suggest that he consider renting a home with friends and sharing the rent. They should tell Tyler that living alone is not ideal for social, emotional, and financial reasons, and that the downsides of living alone far outweigh the so-called advantages.

Q2. **What could or should the Town do?**

Nothing, extended families should be encouraged. Living at home with your parents should not be seen as a problem that the Town needs to 'solve.' Recent immigrants have often used this living arrangement to accumulate the capital to start a family business, send the kids to college, and eventually move into the middle class.

Q3. **Share your housing story.**

At 19 I left home and moved into a basement apartment with my girlfriend and three friends. Individually none of us could afford to live alone, but together we were able to meet our rent, pay for our food, afford our tuition and eventually graduate—one of us ended up teaching anatomy at Yale. Years later we moved to Sunnyvale California where we made friends with someone who was sharing a home in Palo Alto (which is much more expensive than Superior) with four other people. Again, none of them could afford to live on their own, but together they had a home with a swimming pool and garden. As a bonus you will have great parties, and many fond memories (^o^)



Respondent No: 34
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 20:33:10 pm
Last Seen: Feb 21, 2024 20:33:10 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Let I'm stay at home during the contract year and advise him to search for room mates and a rental farther away from the Boulder metro area. Firestone, Fredrick, Ft. Lupton and further north east. Also discuss looking for next teaching job away from the metro area where housing and rentals are less expensive. Also consider looking out of state as Colorado has become a high cost of living state primarily due to cost of housing.

Q2. **What could or should the Town do?**

This issue needs to be addressed at the state level or at minimum the Front Range. I just read that the national level of cost for housing is under $400,000. We are loosing people from our state because of the high cost of living. .

Q3. **Share your housing story.**

Several local friends have kids who have graduated from college, engineering, business sciences and the kids have moved to the midwest and South Carolina also seems to be a hot spot for good jobs and low cost of living. I can't believe housing costs near Boulder and surrounding area. Convince Boulder and surrounding towns like Superior to take a portion of their open space and make available to developers for low cost housing and help get a plan for infrastructure to outlying areas going beyond Boulder County. Think Weld and Adams County.

Respondent No: 35
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 20:35:23 pm
Last Seen: Feb 21, 2024 20:35:23 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

If not working during summer break get a room and board job option like YMCA of the Rockies to network and make income

Q2. **What could or should the Town do?**

Open up vacant rooms during summer on college campus and hire students or alumni to run it like a hotel.,Europe does this often. Create living and multipurpose homes. Like a assisted living center in one wing, gym/rec in another, and on another floor a thrift shop/arc to help fund it,and give young adults employment. Have it also be location for a local affordable garden keeping things pretty, and farmers market because everyone especially college kids need food. The kids could work with the elderly on activities keeping them busy and keeping people healthy with a roof over their head.

Q3. **Share your housing story.**

I am a lifelong paraplegic and had 14 zoom job interviews during covid. All loved me until they found out I was paralyzed so I ended up needing food shelf and selling a lot of my belongings. I worked with vocational rehab to help,and applied for dozens of grants

Respondent No: 36
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 23:24:28 pm
Last Seen: Feb 21, 2024 23:24:28 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Be glad Tyler has a job and that you can help out with a place to stay. Tyler, save up as much money as you can and see if you get rehired at your current job.

Q2. **What could or should the Town do?**

I'm not sure what the town can do. Encourage people to build smaller houses and not give tax breaks for building large. In many places and states it is common for family generations to live together due to economic factors.

Q3. **Share your housing story.**

not answered

Respondent No: 37
Login: Anonymous
Email: n/a

Responded At: Feb 22, 2024 09:40:27 am
Last Seen: Feb 22, 2024 09:40:27 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Good choice Tyler..Samantha needs to move back home and go to a local college. Go to Front Range first than transfer to School of Mines, CU Boulder, or Greely. All are within driving distance of Superior. Living in one home is good for the environment and good for lowering the cost of living for all involved. We live in a society that battles depression and lonliness..most of the world lives in extended families. As the parents age the adult children will be there to help out. Most homes in Superior are certainly large enough to be comfortable for multi-generations.

Q2. **What could or should the Town do?**

I think that buying a few lots and donating them to Habitat to Humanity would be the most seamless way to integrate low cost housing into our town.. Even neighborhoods with big homes can be a multi-generational home or a duplex that looks like a single home.

Q3. **Share your housing story.**

I have three adult children living at home...Two have college degrees and one is pursing a graduate degree. They all lived at home while going to college and worked and are SO fortunate to not carry student loans due to these choices. My one child that moved out has student loan debt...so housing can be the reason for taking on debt in our high cost area.

Respondent No: 38
Login: Anonymous
Email: n/a

Responded At: Feb 22, 2024 11:40:09 am
Last Seen: Feb 22, 2024 11:40:09 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

I feel like we're missing a lot in this story. What is their house size (Superior is full of large house)? Is having Tyler at home a burden to Jack and Diane? He only has a one year contract with his current job, and the pay is very low for this area. If having him at home isn't a burden, then let him stay. Come up with a plan to reassess mid year. He may have a new job with a longer contract, He may have been offered a permanent position. If Tyler wants to move out, he has many options of towns with lower rents in the vicinity of his school. Based on his salary, he would need to have roommates.

Q2. **What could or should the Town do?**

It isn't up to the Town to provide housing for Tyler. They could offer subsidized housing for lower income people, but I don't know the process or who pays for that. It's should not be a burden on current town citizens to pay more just so people can live in Superior. There are many other options here, and people don't need to be locked into one town.

Q3. **Share your housing story.**

At 23 I was a recent college grad working a low paying finance job in the Silicon Valley. (25k annual). Rents were astronomical compared to my salary. Living with my family was not an option in their 1,200 square foot house with 5 people. I lived with a friend's older mother for several years until I could afford a place with a friend 2 years later. Even then, we had to search for an affordable apartment in a safe neighborhood. This was 30+ years ago, and rents ranged between $1,200-$2,000 per month for a 2 bedroom place. It isn't easy when you're young, but you don't need much. It was a struggle for a while, then little by little I started building up my savings.

Respondent No: 39
Login: Anonymous
Email: n/a

Responded At: Feb 22, 2024 13:26:41 pm
Last Seen: Feb 22, 2024 13:26:41 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Kid is 23 and y'all probably just spent $250,000 on Tyler's college education. Grow the fuck up!

Q2. **What could or should the Town do?**

Absolutely nothing...They can afford Oberlin, Tyler will do just fine.

Q3. **Share your housing story.**

So, I lived in crappy studios, had roommates, and *finally* got to where I could afford Horizons (now Bell Flatirons) to live by myself. I was an idiot and didn't buy a house in Superior back in 2010. Finally, I was able to *AFFORD* one—by myself—after working hard, saving money, investing, and living below my means. Now, my house actually means something. It's not "I suck at life decisions, so please give me a house." Go live in Thornton, Broomie, or Aurora, and stop acting like you DESERVE something!

Respondent No: 40
Login: Anonymous
Email: n/a

Responded At: Feb 22, 2024 14:20:37 pm
Last Seen: Feb 22, 2024 14:20:37 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Stay at home as long as you can.If you have debt, concentrate on paying it off. Max out your retirement contributions. Look for paid house-sitting/pet sitting alternatives near work as a side gig.

Q2. **What could or should the Town do?**

not answered

Q3. **Share your housing story.**

not answered

Respondent No: 41
Login: Anonymous
Email: n/a

Responded At: Feb 22, 2024 20:04:07 pm
Last Seen: Feb 22, 2024 20:04:07 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Allow Tyler to live at home for a year or two to save money that he can use to make a down payment, hopefully find a higher paying job, then move to his own home. If he can't afford to live on the Front Range, he should find a job in an area that he can afford.

Q2. **What could or should the Town do?**

Nothing; this is not the Town's responsibility. People who can afford to live here should live here; people who cannot afford to live here should live in an area they can afford.

Q3. **Share your housing story.**

My husband and I saved money while living in a small townhome in Lafayette, saved enough to move into a new (small) home in Erie, built up equity, moved to Superior when we could afford it.

Respondent No: 42
Login: Anonymous
Email: n/a

Responded At: Feb 22, 2024 20:15:04 pm
Last Seen: Feb 22, 2024 20:15:04 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Tyler will need to live at home for several years if he even wants to dream about living in/near Superior. The reality is, he will be stuck renting or purchasing somewhere else in the metro area that is far less desirable. Our future generations, especially on that salary, are completely priced out of Superior. Now and forever.

Q2. **What could or should the Town do?**

Please consider affordable housing in the town's vision and future. Unfortunately, what the town currently considers "affordable" is laughable. Even I, a professional with a doctorate degree, couldn't afford to purchase a home in Superior to downsize, even selling my current home at the current market value, without taking out a large mortagage. This is the last thing I want to consider as I near retirement. Also, with the already high property taxes, I am flabbergasted at why the town board voted to keep more mills, therefore increasing our already unaffordable property taxes. This town is doing everything it can to become an elitist town that nobody can afford to live in.

Q3. **Share your housing story.**

I am a late 40's single professional with one child in college. I would love to downsize and stay in Superior, but there are absolutely zero options here in Superior that would allow me to downsize without taking out a larger mortgage (and pay higher property taxes, which are already astronomical), which is the last thing I want to consider as I near retirement. So, I am stuck in a house that is too much house for me, unfortunately, relying on the equity to hopefully sell one day and likely have to move out of this town that I love.



Respondent No: 43
Login: Anonymous
Email: n/a

Responded At: Feb 23, 2024 10:33:48 am
Last Seen: Feb 23, 2024 10:33:48 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Sunshine Home Share!

Q2. **What could or should the Town do?**

Sunshine Home Share!

Q3. **Share your housing story.**

not answered

Respondent No: 44
Login: Anonymous
Email: n/a

Responded At: Feb 26, 2024 04:34:07 am
Last Seen: Feb 26, 2024 04:34:07 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

They should have steered their child into a profession that would allow him to live in a high cost area. They gave him poor advice, you always need to match your career objectives with your lifestyle objectives

Q2. **What could or should the Town do?**

Nothing!!! This is not a town issue, it is an issue within the family, this city should do nothing!!!! I have four college degrees (two advanced degrees in engineering). My one neighbor has a PhD, my other neighbor has a MBA from Wharton… We worked hard to be able to afford to live here..we made good choices. The city should not get involved, this families made bad choices, that is on them

Q3. **Share your housing story.**

not answered

Respondent No: 45
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 09:15:25 am
Last Seen: Feb 27, 2024 09:15:25 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

That he can get another job in the Summer to make more money and save up for his first house, which probably isn't going to be in the #1 desirable spot. You don't graduate from college and immediately deserve your dream home.

Q2. **What could or should the Town do?**

Tell Tyler to not spend money at Starbucks and brew his own coffee at home so that he can save as much as possible.

Q3. **Share your housing story.**

I was responsible. I saved money for a house that was a starter home. After continuing to save money for that starter home, I got into a better home. I then continued to save money for another 9 years until I could afford the home that I wanted. I made sacrifices like traveling 4 days a week to provide for my family, I didn't ask a town to give me money because I chose a lower paying profession.

Respondent No: 46
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 10:41:31 am
Last Seen: Feb 27, 2024 10:41:31 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Good plan for Tyler to stay with the parents. That way he can save some money for downpayment

Q2. **What could or should the Town do?**

not answered

Q3. **Share your housing story.**

All 3 kids that went to CU Boulder lives with us in Superior, they commute with the bus passed from CU free. Now they all have their own houses since they dont have any tuitions debt .

Respondent No: 47
Login: Anonymous
Email: n/a

Responded At: Feb 29, 2024 21:32:00 pm
Last Seen: Feb 29, 2024 21:32:00 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

Tyler should not expect to be able to rent on his own in Superior on $40k. He should get a roommate and look for an apartment in Commerce City.

Q2. **What could or should the Town do?**

The town should lower real estate taxes so the parents can support their kid going to Oberlin and they can save for retirement. The town needs to serve its residents, not attract people who can't afford to live here. Maybe the parents could buy a condo for Tyler?

Q3. **Share your housing story.**

I think Superior is a nice, upscale community and we should to further increase housing values so it remains a premier housing destination near Boulder. We need to fight any low income housing that Boulder County tries to push on us.

Respondent No: 48
Login: Anonymous
Email: n/a

Responded At: Mar 11, 2024 09:34:13 am
Last Seen: Mar 11, 2024 09:34:13 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about Tyler?**

They should help Tyler make a realistic plan to eventually move out of their home by saving up money to afford housing the in future.

Q2. **What could or should the Town do?**

The Town has neither the obligation nor the power or authority to lower housing prices across the Front Range. So, there is nothing the town can do about this. The Town should stop wasting their time thinking about this and move on to more practical matters.

Q3. **Share your housing story.**

not answered

Diane's parents – Paul and Edna – are in their late 70's. They currently live in rural Nebraska, but Paul's health is declining and he no longer drives, making it more and more difficult for them to live independently. They would like to move closer to Diane and downsize from their 4 bedroom house and multi-acre property. However, they don't have the equity or savings to afford higher home costs in the front range.



Survey Responses

12 August 2019 - 01 July 2024

Paul and Edna

Shape Superior

Project: Housing Needs Assessment & Strategic Plan

BANG THE TABLE engagementHQ

VISITORS					
190					
CONTRIBUTORS			RESPONSES		
34			34		
0 Registered	0 Unverified	34 Anonymous	0 Registered	0 Unverified	34 Anonymous

Respondent No: 1
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 11:26:43 am
Last Seen: Feb 14, 2024 11:26:43 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Have the parents move to Broomfield into a house they can afford. Possibly rent a room to another senior for income.

Q2. **What could or should the Town do?**

Nothing.

Q3. **Share your housing story.**

not answered

Respondent No: 2
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 11:55:51 am
Last Seen: Feb 14, 2024 11:55:51 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Have their parents move in with them, to save rent and also make it easier to care for them. Consider potentially getting a larger home that would be more feasible for Edna / Paul to share with Jack / Diane.

Q2. **What could or should the Town do?**

Allow ADUs.

Q3. **Share your housing story.**

not answered

Respondent No: 3
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 12:15:52 pm
Last Seen: Feb 14, 2024 12:15:52 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Multi-acre property? Seems unrealistic in his area. If they want to move to the area, senior housing makes more sense. They are in their late 70s, so buying such a high-maintenance property makes no sense. They may as well stay where they are and fly to visit more often.

Q2. **What could or should the Town do?**

NOTHING

Q3. **Share your housing story.**

not answered

Respondent No: 4
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 13:22:32 pm
Last Seen: Feb 14, 2024 13:22:32 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Paul and Edna should move in with Diane and Jack. Problem solved. This is what family is for: to help each other. I would give anything for my parents to be alive and if they were alive with a similar situation, I will take care of them ..No questions asked!

Q2. **What could or should the Town do?**

The town shouldn't do anything in this situation. Diane and Jack have the answer. Cheers

Q3. **Share your housing story.**

not answered

Respondent No: 5
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 15:02:27 pm
Last Seen: Feb 14, 2024 15:02:27 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

not answered

Q2. **What could or should the Town do?**

Do NOT do affordable housing! They can look elsewhere. Everyone else in town will suffer. We left Houston to get away from this.

Q3. **Share your housing story.**

not answered

Respondent No: 6
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 15:19:29 pm
Last Seen: Feb 14, 2024 15:19:29 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

This is what my parents face after my step fathers fall. They can't afford to move from Indiana to Colorado to be near their step daughter and biological daughter (who lives in Denver).

Q2. **What could or should the Town do?**

It is not the town's responsibility to do anything about this. My parents need to consider apartments or other areas of the country that is in their price range

Q3. **Share your housing story.**

not answered

Respondent No: 7
Login: Anonymous
Email: n/a

Responded At: Feb 14, 2024 15:36:29 pm
Last Seen: Feb 14, 2024 15:36:29 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Either subsidize your parents, or move to where your parents can afford.

Q2. **What could or should the Town do?**

Nothing

Q3. **Share your housing story.**

not answered

Respondent No: 8
Login: Anonymous
Email: n/a

Responded At: Feb 15, 2024 06:14:49 am
Last Seen: Feb 15, 2024 06:14:49 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Do some research. There are opportunities available. They Do NOT have to live on the Front Range. The Front Range is not currently a good place for affordable housing. That doesn't mean there aren't better alternatives. The Front Range has a tremendous number of problems and Paul and Edna may be trading one set of problems for bigger/worse problems.

Q2. **What could or should the Town do?**

Quit trying to be a "be all, end all". Colorado is not currently affordable. Colorado has tremendous problems that haven't been addressed, many due to overpopulation.. Superior would do best to take care of the current issues in town (The streets are in horrible shape for example).

Q3. **Share your housing story.**

not answered

Respondent No: 9
Login: Anonymous
Email: n/a

Responded At: Feb 15, 2024 08:37:37 am
Last Seen: Feb 15, 2024 08:37:37 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Help Jack and Diane build an ADU in their back yard with the proceeds of their property sale (after the state mandates that this must be an option available to people)

Q2. **What could or should the Town do?**

Make ADU's legal

Q3. **Share your housing story.**

not answered

Respondent No: 10
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 15:57:37 pm
Last Seen: Feb 21, 2024 15:57:37 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

They don't have any equity in a 4 bedroom house and multi-acre property? Wow, sounds like some bad financial decisions were made along the way. I'd advise them to move to one of the many apartment buildings that have sprung up along the eastern edge of Superior in Broomfield to downsize and still be near family.

Q2. **What could or should the Town do?**

The only thing the town should do would be to encourage people to build ADU's. This would solve so many problems.

Q3. **Share your housing story.**

Saved responsibly, bought a condo, continued to save, sold the condo and bought a small house, continued to save, sold the small house and bought a house in Superior. Had roommates to help afford the rent at times. Lost jobs, got jobs, got married, had kids, etc. And not once did I expect Superior or any of the other nearby towns I lived in for assistance regarding housing.

Respondent No: 11
Login: Anonymous
Email: n/a

Responded At: Feb 21, 2024 16:12:04 pm
Last Seen: Feb 21, 2024 16:12:04 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

not answered

Q2. **What could or should the Town do?**

The town let the ship sail and has screwed us all

Q3. **Share your housing story.**

not answered

Respondent No: 12
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 09:05:38 am
Last Seen: Feb 27, 2024 09:05:38 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

This is sad, but maybe they should just move in with jack and Diane---but it the family's decision, the city should not try to help here at all

Q2. **What could or should the Town do?**

Nothing!!! this is not the Town's job

Q3. **Share your housing story.**

not answered

Respondent No: 13
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 09:07:57 am
Last Seen: Feb 27, 2024 09:07:57 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Look at options they can afford nearby (~10 miles) radius from the front range that are more affordable vs trying to move to an area in high demand

Q2. **What could or should the Town do?**

Nothing, there are more affordable options within a reasonable proximity of the Front Range

Q3. **Share your housing story.**

not answered

Respondent No: 14
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 09:09:41 am
Last Seen: Feb 27, 2024 09:09:41 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Move to a lower cost area that is closer, like Erie or Longmont.

Q2. **What could or should the Town do?**

NOTHING. The town shouldn't be doing anything to help out of state people that don't have savings or equity. That isn't a problem for the town to solve. The town of Superior needs to fix roads, pools, amenities, etc. not subsidize housing for people who didn't plan properly.

Q3. **Share your housing story.**

My housing story is that I worked hard, saved money and made difficult choices like not having the latest iphone or newest car so I could afford to buy a house in Superior after saving for 10 years. This is a desirable place to live with a finite number of homes, this will drive up the prices.

Respondent No:	15	**Responded At:**	Feb 27, 2024 09:20:06 am
Login:	Anonymous	**Last Seen:**	Feb 27, 2024 09:20:06 am
Email:	n/a	**IP Address:**	n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Jack and Diane should move to Nebraska to be closer to their parents. Otherwise, Jack and Diane can contribute their own money to help their parents move to Colorado.

Q2. **What could or should the Town do?**

Nothing - There are plenty of areas throughout the U.S. that both sides of the family can move to in order to accommodate their preferred cost of living and proximity to each other.

Q3. **Share your housing story.**

not answered

Respondent No: 16
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 09:20:20 am
Last Seen: Feb 27, 2024 09:20:20 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Investigate Senior Cooperative Housing. I will be moving from Superior this summer to the Broomfield Village Coop currently under construction. This is one of I think 10 being built or already open around Colorado. Another is starting in Erie soon.

Q2. **What could or should the Town do?**

Become familiar with how Coop work. These are HUD sponsored programs for senior active adult living. We will have many residents in their 70's and 80's (I'm 74). Each residents owns a share of the Coop based on their units size and pays a monthly fee that covers the HUD backed mortgage and expenses like maintenance of building, landscaping and common areas.

Q3. **Share your housing story.**

I raised a family (one daughter) in Boulder who is grown and moved away. My ex-wife and I split up five years ago and I started looking for a Coop. I moved to Superior's Bell Flatiron apartments and have seen large rent increases every year. Superior would do well to become familiar with this alternative and make it a housing option available here.



Respondent No: 17
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 09:28:18 am
Last Seen: Feb 27, 2024 09:28:18 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Unfortunately, we don't always get what we want. We should live within our means. What kind of equity do the parents have in their currnet property? Any other sources of income (retirement savings, pensions, etc.)? Find somewhere they can afford. This is not our town's problem, this is an individual issue that many of us have faced or will face. Again, live within your means - wherever that may be. Just because we WANT to live near our family does not mean that we can.

Q2. **What could or should the Town do?**

It would be nice to have more patio homes that are for 55+ ages only.

Q3. **Share your housing story.**

not answered



Respondent No: 18
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 09:45:33 am
Last Seen: Feb 27, 2024 09:45:33 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Huge economic mistake to move from Nebraska to the front range. They need to meet with a financial planner, learn if it makes more sense to sell and move into a more retirement friendly neighborhood or hire in home help. Diane can travel to see her folks.

Q2. **What could or should the Town do?**

Why would the town get involved in this personal matter?

Q3. **Share your housing story.**

I get it your are trying to get people to create compassion around made up stories from Boulder Housing Coalition. Superior is full, it's a four mile town, if Diane wants her parents close to her she will have to figure out whether she is moving to Nebraska or find a nice retirement village close by.

Respondent No: 19
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 10:00:11 am
Last Seen: Feb 27, 2024 10:00:11 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Put them up in Senior Living. For the cost they would buy a house, they can afford a nice, $3K monthly housing allowance at something like Belfour or Sunrise. Done deal. The government is not the answer.

Q2. **What could or should the Town do?**

NOTHING! What do you propose the town "do"? Artificially lower some houses by 50%? Make a huge chunk of those ugly apartments you are building in downtown Section-B housing? Bringing in a ton of undesirable and shifty population? Most likely a ton of illegal aliens, too?

Q3. **Share your housing story.**

We bought our home in 2006. We have lived there since and paid the mortgage down. Now it is worth more. Some day, we will move out of this dumb town (dumb, because of the town government, not dumb because of the beauty and locale and access to open spaces) with a large equity due to our rational living-style.

Respondent No: 20
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 11:12:43 am
Last Seen: Feb 27, 2024 11:12:43 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Perhaps look at Nebraska since Colorado taxes and cost of living is much higher.

Q2. **What could or should the Town do?**

Stop raising taxes and try to lower the cost of living.

Q3. **Share your housing story.**

not answered

Respondent No: 21
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 12:03:37 pm
Last Seen: Feb 27, 2024 12:03:37 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Have them look elsewhere (not Superior)

Q2. **What could or should the Town do?**

Nothing

Q3. **Share your housing story.**

not answered

Respondent No: 22
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 12:06:13 pm
Last Seen: Feb 27, 2024 12:06:13 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Maybe help the parents pay for a house. Get a small apartment in town. I guess they can't stay with Jack and Diane because they will be downsizing after the kids go to college. Maybe they all will need to move somewhere cheaper. This is the reality of wanting to live here, you need a lot of money.

Q2. **What could or should the Town do?**

Nothing they can do unless they want to pay for some of peoples housing costs.

Q3. **Share your housing story.**

Bought a smaller house in Superior. Would like to stay but the airport noise is too much. Might have to move to a cheaper state and buy a single level house for the senior years.

Respondent No: 23
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 12:35:58 pm
Last Seen: Feb 27, 2024 12:35:58 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

We don't need affordable housing. They can look elsewhere, like we did. We couldn't afford Boulder so we don't live there. We live here in superior because it's not run down like Houston was. Keep it Superior!

Q2. **What could or should the Town do?**

We don't need affordable housing.

Q3. **Share your housing story.**

We don't need affordable housing.

Respondent No: 24
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 12:45:54 pm
Last Seen: Feb 27, 2024 12:45:54 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

They should look for a home in an area with more affordable housing costs that fit their budget. They should not expect a town to modify their entire community for their needs. There are many places nearby that offer assisted living and beautiful neighborhoods with more moderate housing costs.

Q2. **What could or should the Town do?**

NOTHING! The town is not responsible for 'providing' housing options for everyone. We moved here (along with many others) because of the way the town EXISTS - not to change it.

Q3. **Share your housing story.**

We moved to Superior in 2010 with a housing stipend to rent from my husbands job. When we decided to stay in the area we bought a house in 2012 that fit at the top of our budget. We love our neighborhood and the way Superior was when we first moved here. Superior is losing it's small town charm and close-knit community feel with all the multi-unit housing going up. While our house has increased in value since we bought it, the market and our family season are not favorable for us to move just yet so we are waiting until it fits our budget - which people need to do in general. Not everyone can afford to live in Superior and THAT'S OK.

Respondent No: 25
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 12:45:58 pm
Last Seen: Feb 27, 2024 12:45:58 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Either have Diane move to Nebraska where the cost of living is less or Paul and Edna need to look in areas of the Front Range that are less expensive than Superior. There are 50+ communities in Broomfield, Thorton, Arvada, Loveland, Fort Collins that are more affordable than Superior and within a reasonable distance from Superior.

Q2. **What could or should the Town do?**

1. Realize that past decisions and choices made by Trustees and other Boulder County officials have had a direct impact on the cost of housing in Superior. Open space costs money. Land is scarce and costs money. Stringent building codes cost money. The current political party has borrowed, printed and spent money which has raised the cost of money and living expenses. 2. Superior is not big enough to absorb the costs of providing housing for lower income families. There are not enough businesses in Superior to generate the tax base required to offset expenses for low income housing. Boulder County already has some of the highest property taxes in the state. Superior cannot expect to raise property taxes any more without creating a negative impact on the current residents. 3. Be REALISTIC!

Q3. **Share your housing story.**

We are rebuilding our house after the Marshall fire destroyed it. We have reduced the size of the house and had to make some tough choices due to budget constraints. This is an unfortunate reality of the current cost of building, even when we are doing a substantial amount of the work ourselves. The reality is it is VERY expensive to build a house and even more expensive when it is in Boulder County.

Respondent No: 26
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 14:00:11 pm
Last Seen: Feb 27, 2024 14:00:11 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Move in with family, assisted living in less expensive areas near Denver, Jack and Diane can move elsewhere. This is a problem across the country and is not unique to Superior or Boulder County.

Q2. **What could or should the Town do?**

Nothing

Q3. **Share your housing story.**

Is it expensive to live in this area? Yes. That is because it is a highly desirable area due to its scenery, lifestyle, etc. Would I like to stay in the area once I retire (only a few years out)? Of course I would. But I also wouldn't expect everyone else in this area to make sacrifices so that I can stay. That's silly and unreasonable.

Respondent No: 27
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 15:17:42 pm
Last Seen: Feb 27, 2024 15:17:42 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Private

Q2. **What could or should the Town do?**

Sales my Profit

Q3. **Share your housing story.**

Yes

Respondent No: 28
Login: Anonymous
Email: n/a

Responded At: Feb 27, 2024 16:55:42 pm
Last Seen: Feb 27, 2024 16:55:42 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Tell Jack and Diane to move closer to their parents, buy a multi generational house & have parents move in, or tell Jack & Diane to vote differently so cost of living won't continue sky rocketing.

Q2. **What could or should the Town do?**

Absolutely nothing!! Jack & Diane's parents are NOT the city's responsibility! Lower taxes, stop spending money on road "repurposing" projects, give extra money to lower OUR OWN TAXES. Mine went up TWO THOUSAND DOLLARS!!

Q3. **Share your housing story.**

I personally know many families on our block that have multiple generations living in it. Stop being a woke government focused on initiatives that our own residents don't want!

Respondent No: 29
Login: Anonymous
Email: n/a

Responded At: Feb 28, 2024 00:09:42 am
Last Seen: Feb 28, 2024 00:09:42 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

The cost of housing in the Front Range is the least of Diane's parents problems. With failing health and with an inability to drive Diane's parents should not be living on their own. I would advise Jack and Diane to invite her parents to either live with them and share expenses, which would be mutually beneficial, or find an affordable independent living facility in Nebraska.

Q2. **What could or should the Town do?**

Nothing. This is a problem for Jack and Diane to solve.

Q3. **Share your housing story.**

My wife and I had been married less than six months when we had to take my mother in after my father's death. This was not the most romantic arrangement for a newly married couple living in a 600 square foot apartment, but we managed. Eventually, after her medical issues were addressed, we were able to get her a room at the Women's Catholic League, and a job at the childrens hospital near by.

Respondent No: 30
Login: Anonymous
Email: n/a

Responded At: Feb 29, 2024 21:47:30 pm
Last Seen: Feb 29, 2024 21:47:30 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Wow that's a hard one. Maybe the parents could afford something near Cheyenne and be closer to Jack and Diane? There is assisted living at Primrose Retirement Communities in Cheyenne, maybe they could try that?

Q2. **What could or should the Town do?**

The town should point Jack and Diane to a realtor so they can sell their house and move to Greeley with the parents so that they can find more affordable housing that both families can work with. The town shouldn't assume that people moving from low cost to high cost areas can be accommodated in an upscale town in a high cost area. These are life choices made by people, not problems solved by small towns.

Q3. **Share your housing story.**

This just happened in my family. Our parents needed to be closer so they sold their home in the Midwest and moved to Boulder where there is excellent care. Boulder is very close and it worked out great! Superior is close to Boulder which has a lot of options for people.



Respondent No: 31
Login: Anonymous
Email: n/a

Responded At: Mar 02, 2024 10:01:15 am
Last Seen: Mar 02, 2024 10:01:15 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Wanting to have her parents live closer is relative. Moving to Boulder County seems to be totally out of reach given their savings and equity position. Maybe you should think about them moving to more rural areas in Eastern Colorado, a smaller community that has older low cost housing and possibly assisted living available. Another potential if you want them real close put them in your basement.

Q2. **What could or should the Town do?**

Maybe the town could issue permits to allow full kitchens in basements. Or perhaps, allow additions to existing houses that would permit less distance between existing homes or less setbacks to allow add on structures with some privacy like a bedroom small kitchen and living room.

Q3. **Share your housing story.**

We have been looking for years up and down the front range for the right new ranch style house in a nice area. We almost had a Remington home (they were a tad too small) built in Arvada. We looked from Ft Collins to Colorado Springs but every time when we came back home to Superior we realized that Rock Creek has the best outdoor open space of anywhere, we had easy quick access to Denver and Boulder, less than 30 minutes to a baseball game and less than 15 minutes to downtown Boulder, (just wish we could find a parking space), local hospital, shopping mall (what is left of it and in Louisville/Lafayette has some access to local dining. So we've just continued to update our house.

Respondent No: 32
Login: Anonymous
Email: n/a

Responded At: Mar 04, 2024 21:58:50 pm
Last Seen: Mar 04, 2024 21:58:50 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

Their parents will need to live with them, probably. There's absolutely no affordable housing for seniors anywhere in the front range, especially Superior. The only other way to afford housing in the post-retirement age is to draw large amounts from retirement savings, which is not ideal.

Q2. **What could or should the Town do?**

Encourage developers that want to build affordable housing and smaller homes. Would be nice to see single-level ranch homes in Superior.

Q3. **Share your housing story.**

I am middle aged and a single mother. Retirement in on the horizon in the next 10 years. I'd love to downsize, but the only way for me to do this would be to spend more money (even for a smaller home in Superior) or move out of Superior. I love Superior, so I guess I'll stay put in a home that is too big for my needs (but comes along with larger utility and insurance costs). I feel absolutely stuck.

Respondent No: 33
Login: Anonymous
Email: n/a
Responded At: Mar 11, 2024 09:32:19 am
Last Seen: Mar 11, 2024 09:32:19 am
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

As nice as it would be for Jack and Diane if there was a house right next door that was inexpensive and the perfect size for their aging parents, this just isn't the case. They will need to help Paul and Edna to make a realistic plan because front range home prices in general will not accommodate Paul and Edna's desire for a small inexpensive house very near to their children. The reason for this is that in the US we operate in a market economy where people have the freedom to chose which house to buy, which career to pursue, etc. And, a lot of people who have worked hard to pursue high earning careers have decided that they want to live on the front range in Colorado, and they have spent their life savings on homes to make that happen. Thus, home prices are high, and it isn't a part of the country folks should be looking at to live cheaply in retirement. Jack and Diane will have to face the same difficult questions that many families with aging relatives face. Do they consider an assisted living facility or nursing home in an area where the parents can afford the fees? Such facilities do exist near Superior. Do they consider having the parents move into their own home, which is likely to have 3 or more bedrooms and could accommodate the parents? This will be deeply personal choice for them, and I would advise them to pick something that will show love for their parents but also be sustainable for them in the long run.

Q2. **What could or should the Town do?**

The Town has no obligation to provide every type of housing that anyone who may wish to move here could possibly want. There are towns in the world where housing is expensive, and there are towns were it is cheap. There are industrial towns, rural farming towns, giant metropolises, etc. In other words, there are many other places people can choose to live, and Superior doesn't have to try to be everything to everyone. It's ok if this town caters to a certain niche of people. It can be and very likely will be a moderately upscale bedroom community housing middle class families, many of whom are commuters to Boulder and Denver. Some people will chose to move away when their house becomes to large for them, making space for other families the children to move in. And that's ok. Superior is a very small town where the vast majority of the land is already covered in housing development. The housing that does exist is largely in good shape, and there would be no sense in getting rid of it. Thus, there simply isn't room to do much on housing. One small thing that could be beneficial is to allow accessory dwelling units throughout Superior (would mainly apply to Rock Creek). The Town should consider that. Otherwise, trying to fight against the unassailable fact that the front range has high housing prices is a huge waste of time for the Town, and they should focus on other more practical priorities for the Town residents who live here and pay the taxes.

Q3. **Share your housing story.**

Both my wife and I worked very hard in high school, earned our way into good universities, worked hard there in challenging degrees that promised high earning careers, and spent over a decade working long hours in those careers to enable us to save the money to purchase a home in Superior. And, we love living here. We knew we wanted to live in Colorado before we were 20 years old, but we sweated away living in inexpensive housing on the Gulf Coast where pay was high in order to save for our down payment. We didn't purchase the home until we were well into our 30's. The people like us who have worked very hard to move here have invested our whole lives savings into our Superior homes. I hope the Town will keep that in mind when complaining about high housing prices. If those prices were to drop, that would put the sole major investments of many families into the red. The Town should be working for the residents of the Town to make Superior a constantly better place to live for the residents who are paying the taxes here.

Respondent No: 34
Login: Anonymous
Email: n/a

Responded At: Mar 17, 2024 13:49:31 pm
Last Seen: Mar 17, 2024 13:49:31 pm
IP Address: n/a

Q1. **What advice would you give Jack and Diane about their parents?**

not answered

Q2. **What could or should the Town do?**

Please seriously consider building tiny homes or "rent-to-buy" studio or one-bedroom apartments for older adults who would still want to own property, instead of paying just rent, but do not have this tiny house or "rent-to-buy" property options anywhere!

Q3. **Share your housing story.**

not answered

INCREASE HOUSING CHOICES FOR PEOPLE

SURVEY RESPONSE REPORT

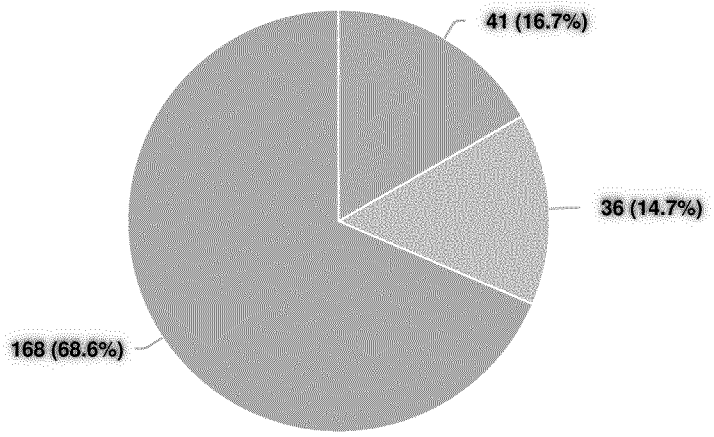
12 August 2019 - 07 April 2024

PROJECT NAME:
Housing Needs Assessment & Strategic Plan

BANG THE TABLE engagementHQ

SURVEY QUESTIONS

Q1 Explore reducing minimum parking requirements for missing middle housing, multifamily, mixed-use, senior housing, and ADU's.

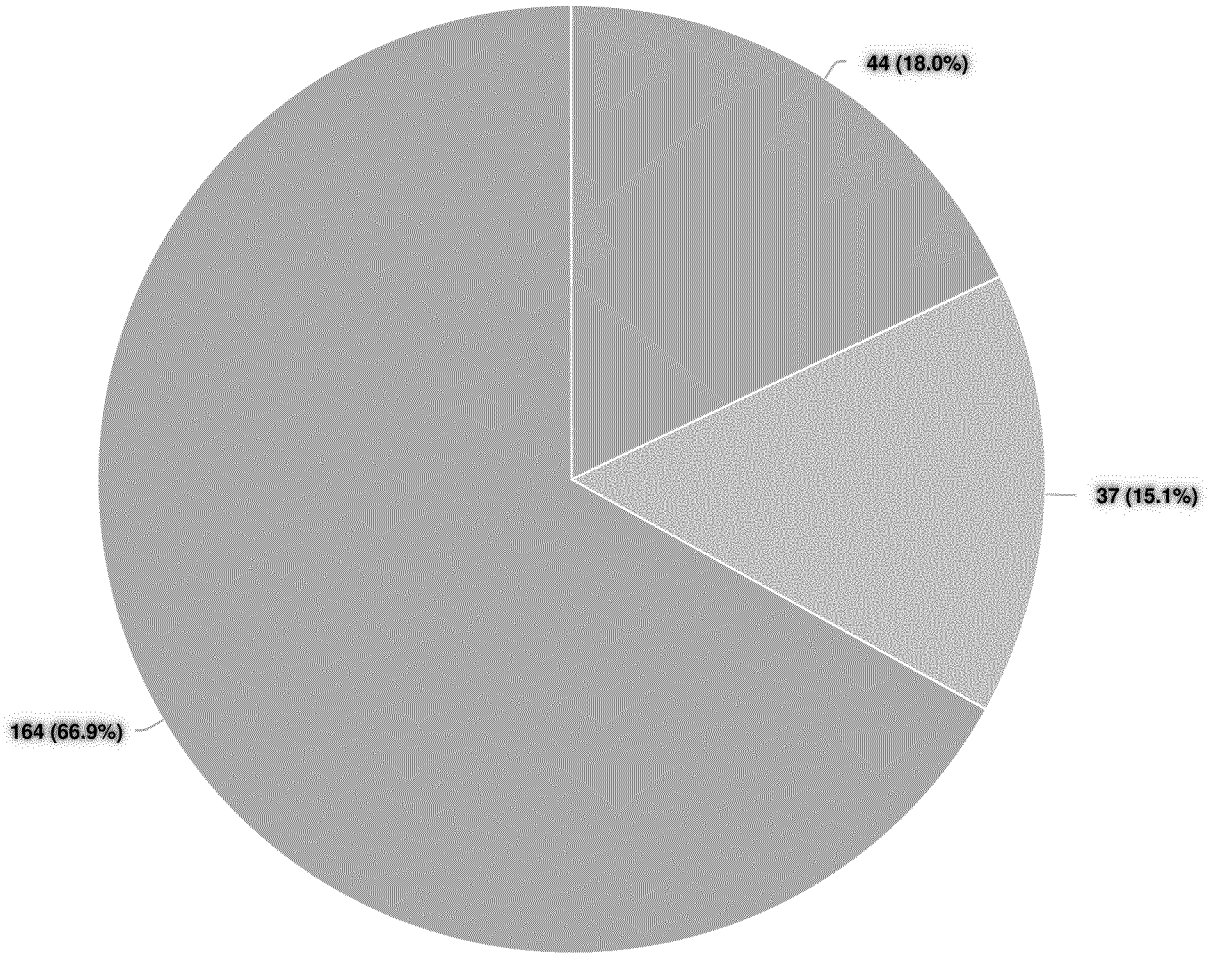


Question options

Support Neutral Do not support

Optional question (245 response(s), 2 skipped)
Question type: Radio Button Question

Q2 Evaluate parking reductions for housing types and analyze the modification of on-street parking.

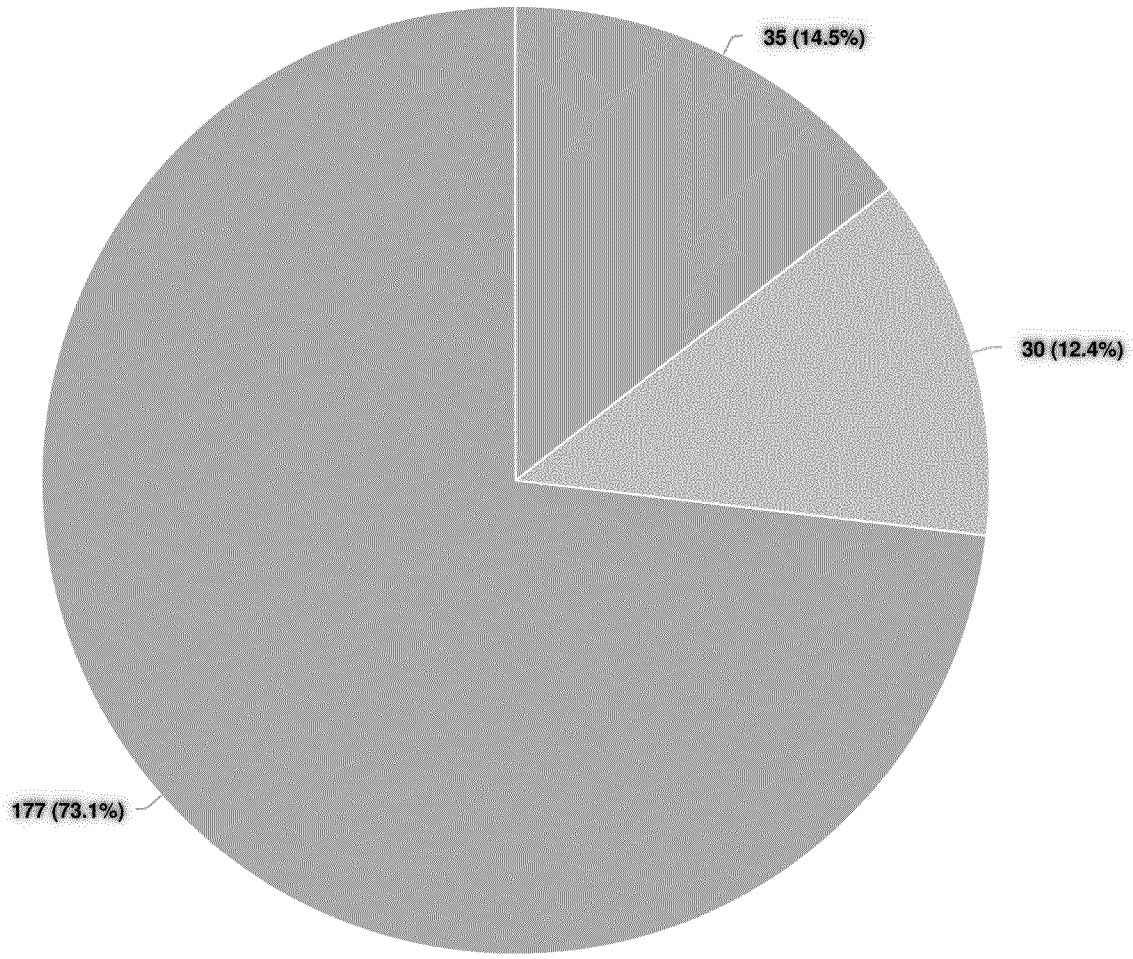


Question options

Support Neutral Do not support

Optional question (245 response(s), 2 skipped)
Question type: Radio Button Question

Q3 Establish thresholds for development types that could be approved administratively without a Town Board or public hearing meeting to support state housing legislation such as Proposition 123.

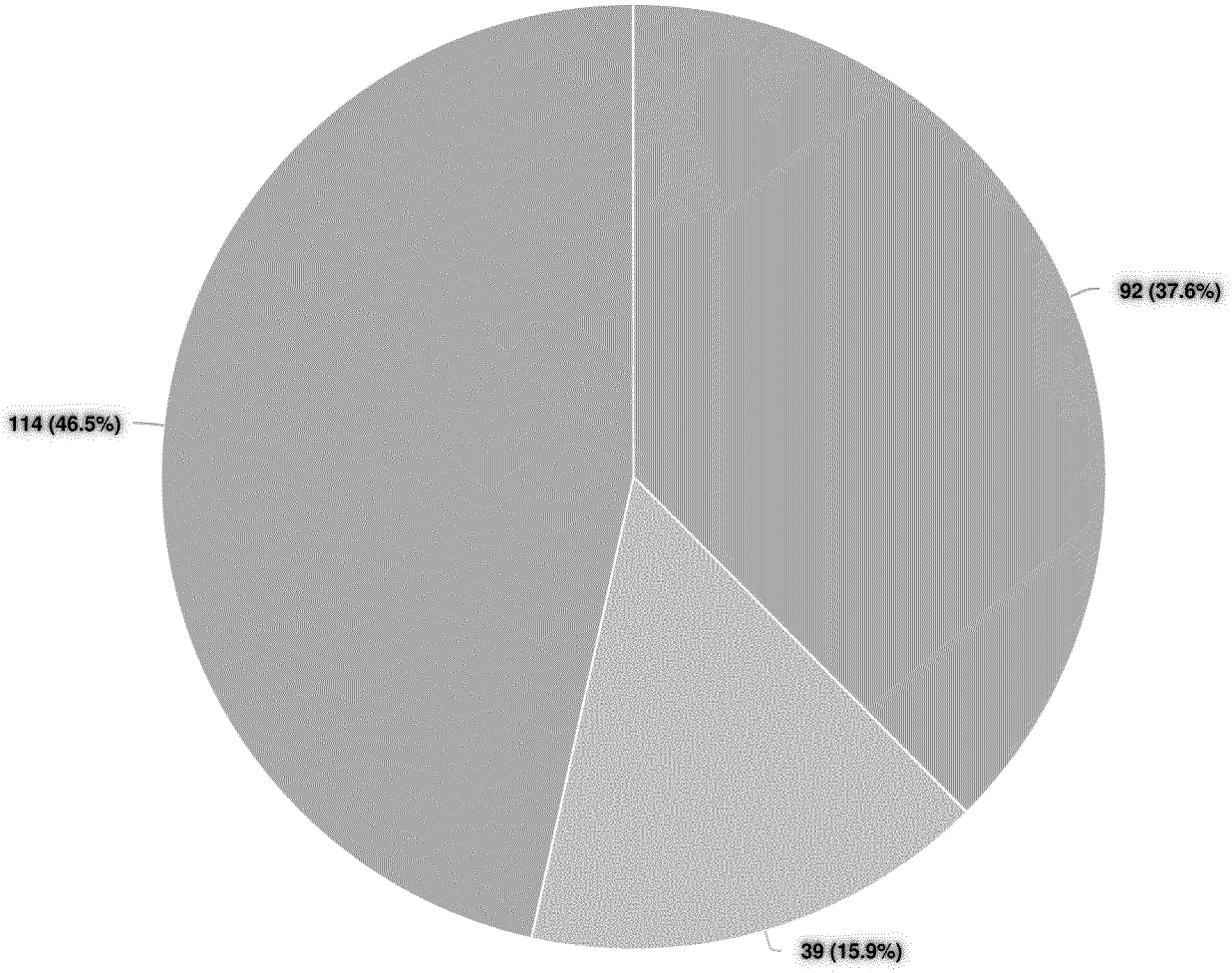


Question options

Support Neutral Do not support

Optional question (242 response(s), 5 skipped)
Question type: Radio Button Question

Q4 Explore allowing ADU's town wide.

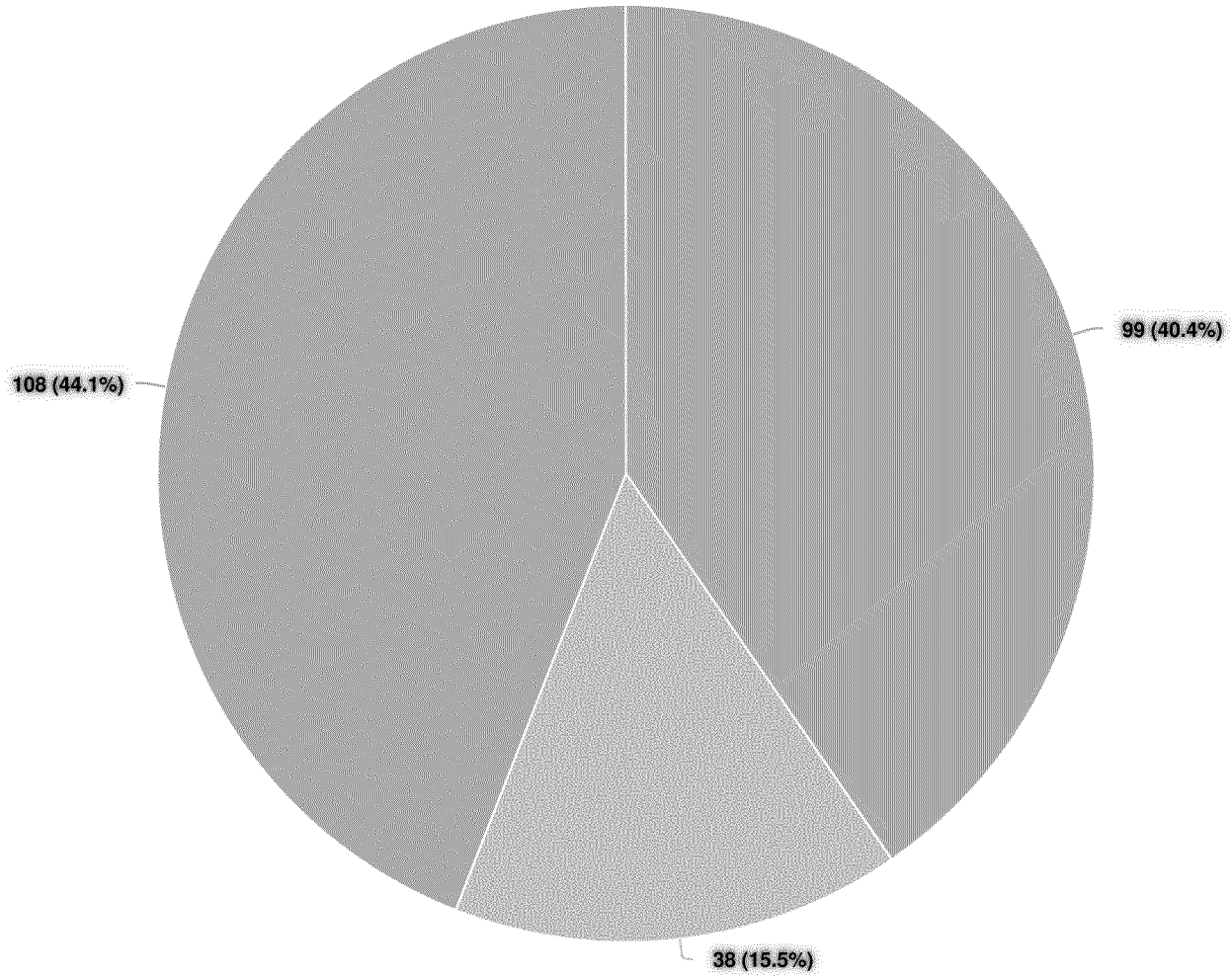


Question options

Support Neutral Do not support

Optional question (245 response(s), 2 skipped)
Question type: Radio Button Question

Q5 Review and clarify ADU development standards to make it easier to develop this housing type.

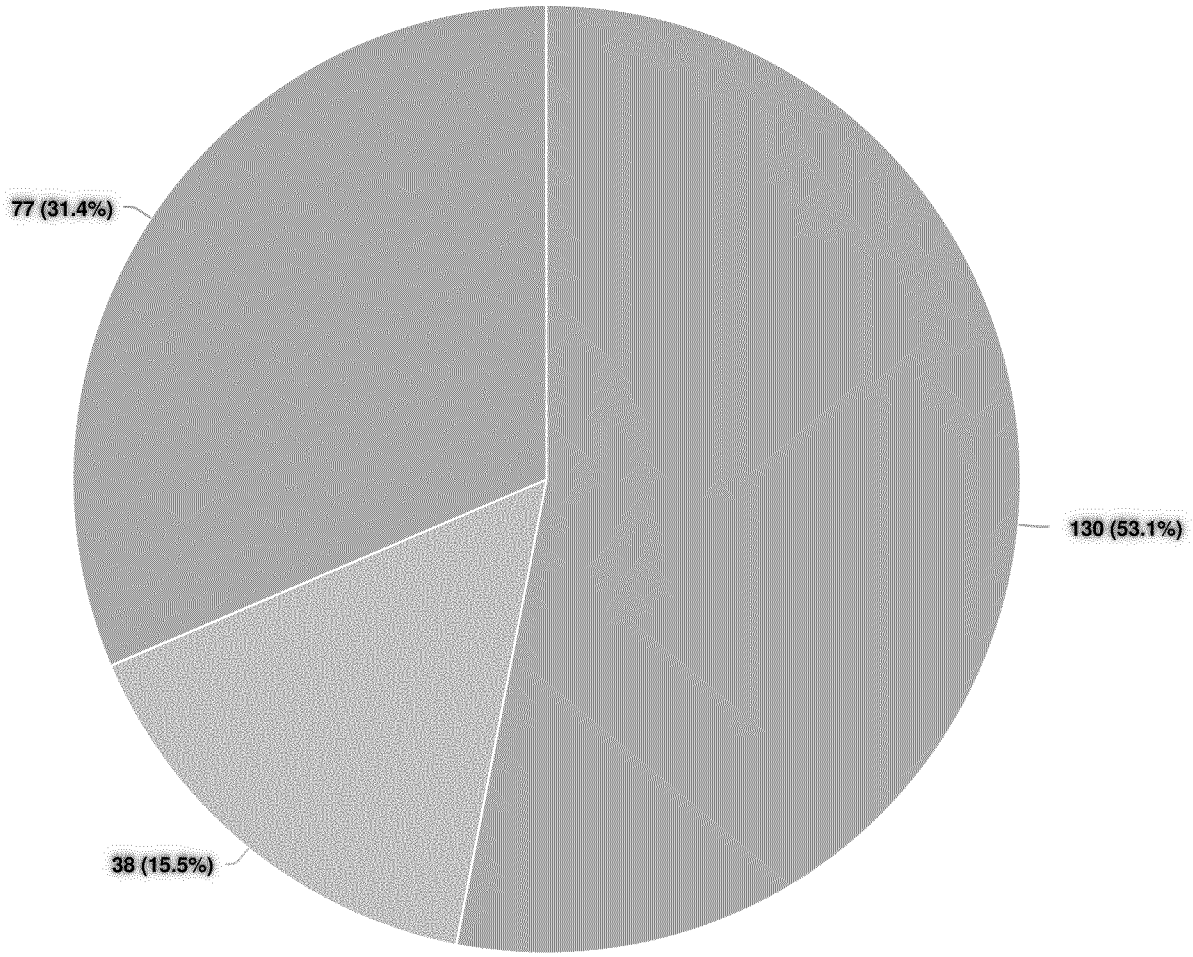


Question options

Support Neutral Do not support

Optional question (245 response(s), 2 skipped)
Question type: Radio Button Question

Q6 Establish clear and objective development standards for new housing in newly established neighborhoods.

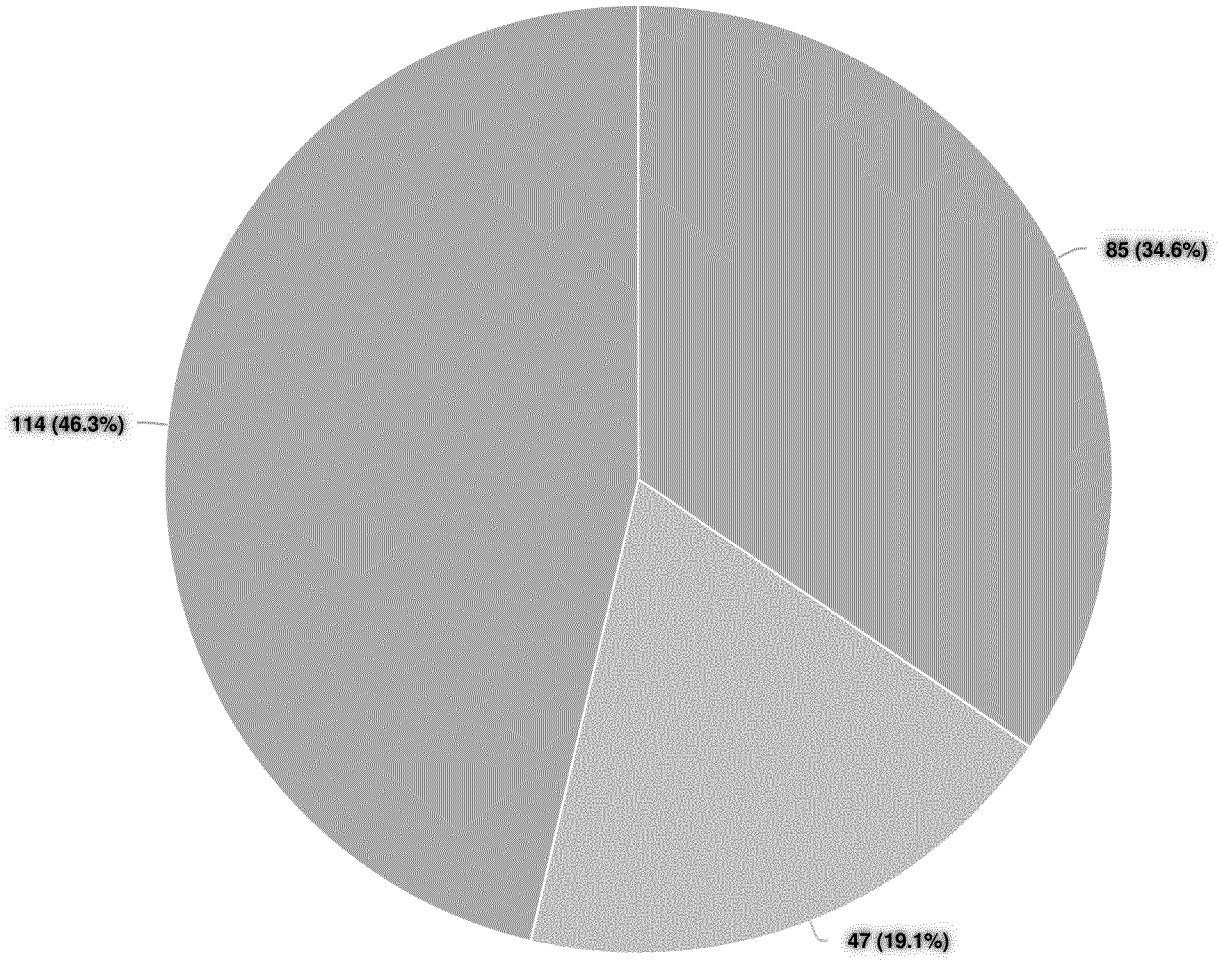


Question options

Support Neutral Do not support

Optional question (245 response(s), 2 skipped)
Question type: Radio Button Question

Q7 Develop pre-approved ADU housing plan sets to streamline review process and development of this housing type.

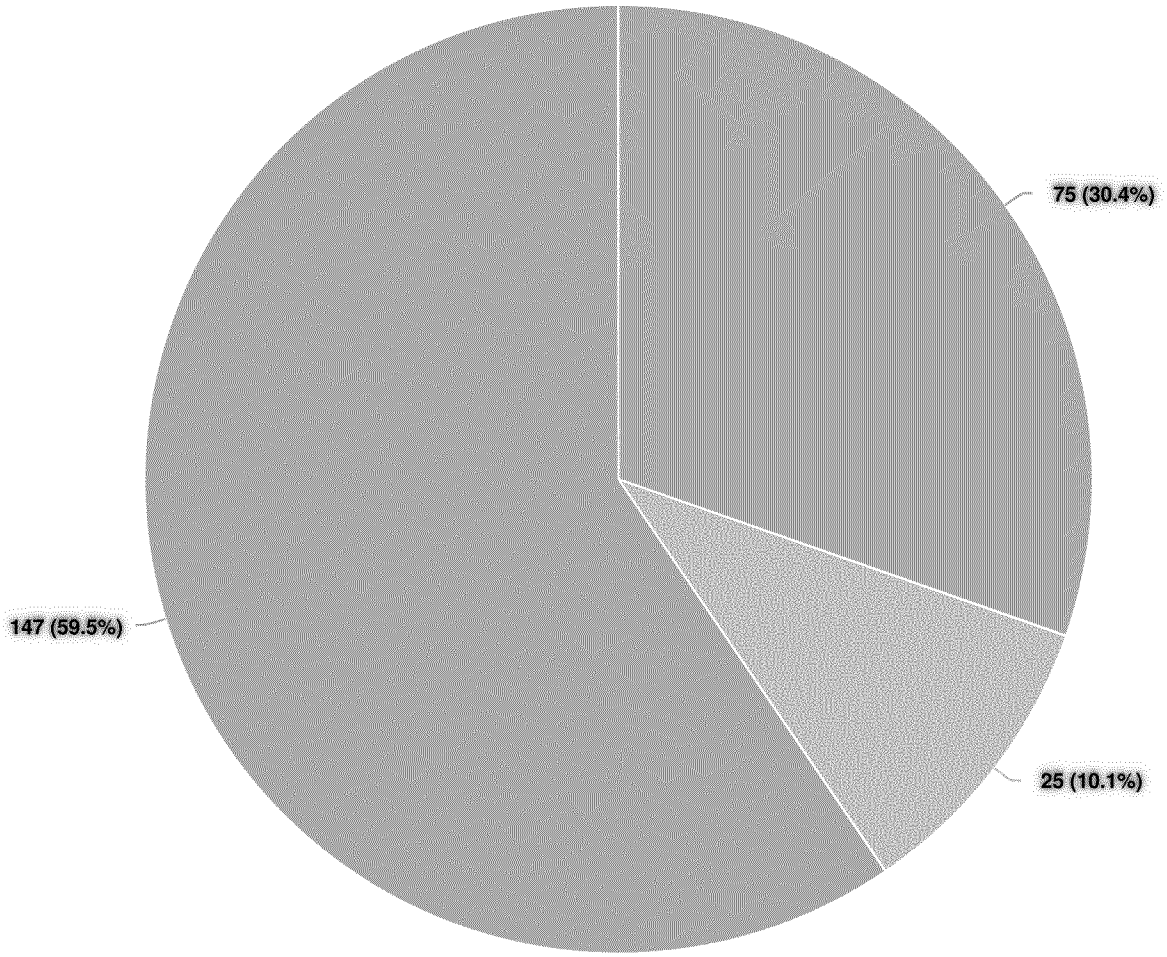


Question options

Support Neutral Do no support

Optional question (246 response(s), 1 skipped)
Question type: Radio Button Question

Q8 Explore areas of Town that could support additional mixed-use density as part of the Comprehensive Plan update process.

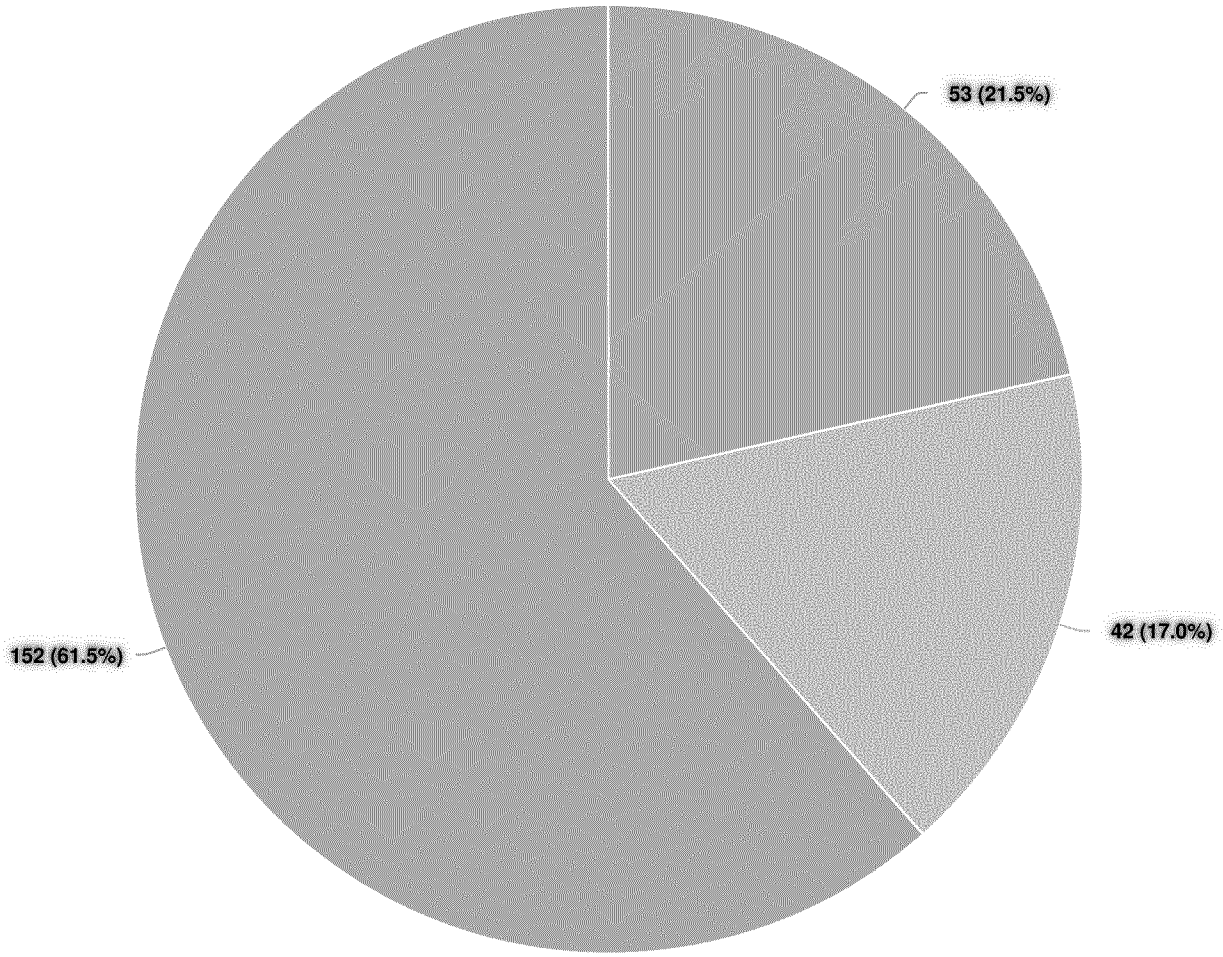


Question options

Support Neutral Do not support

Optional question (247 response(s), 0 skipped)
Question type: Radio Button Question

Q9 Explore incentives for ADU's and tie it to affordability requirements such as deed-restrictions.

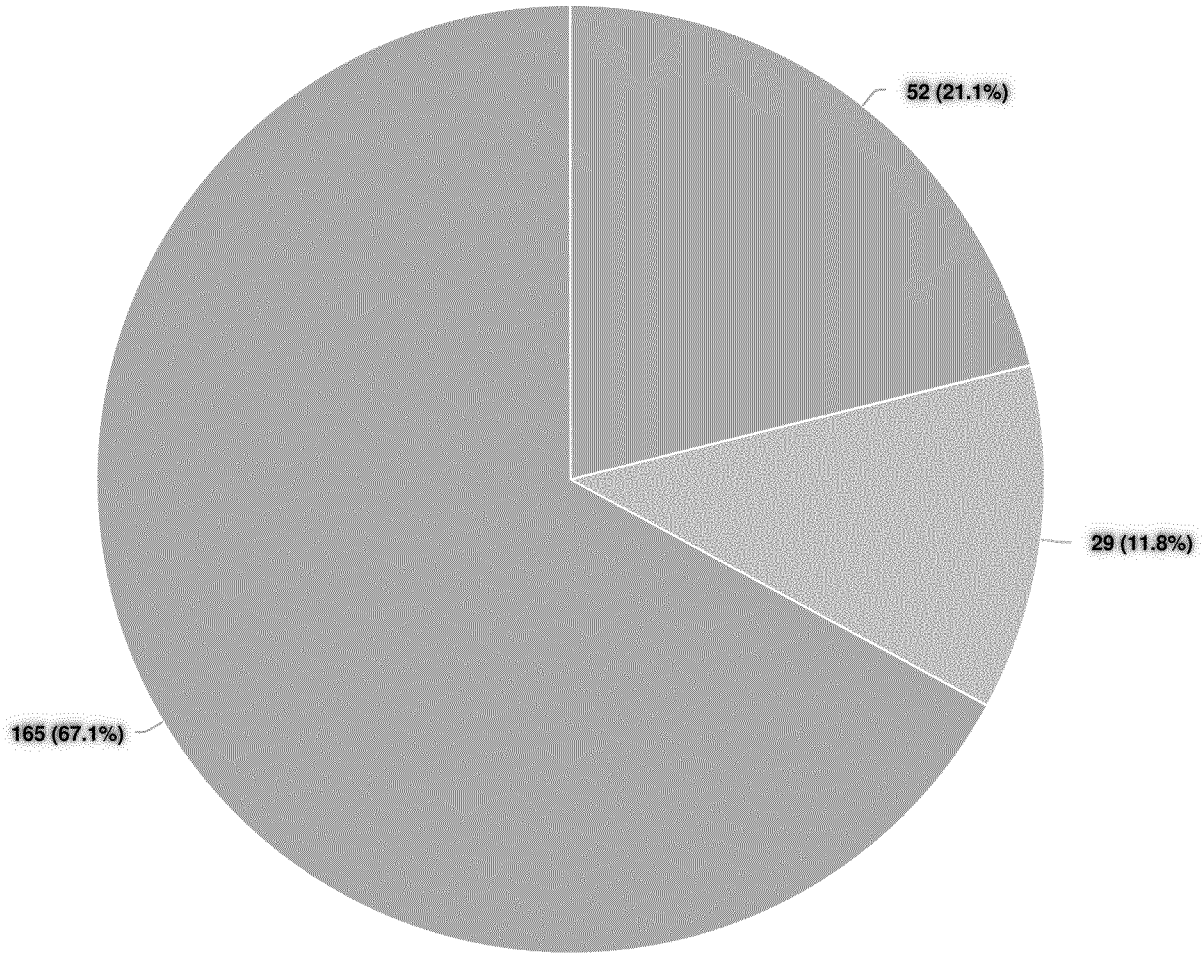


Question options

Support Neutral Do not support

Optional question (247 response(s), 0 skipped)
Question type: Radio Button Question

Q10 Evaluate minimum lot size, setbacks, lot coverage, and design standards to allow for increased density across all zones and existing planned developments (PD's).

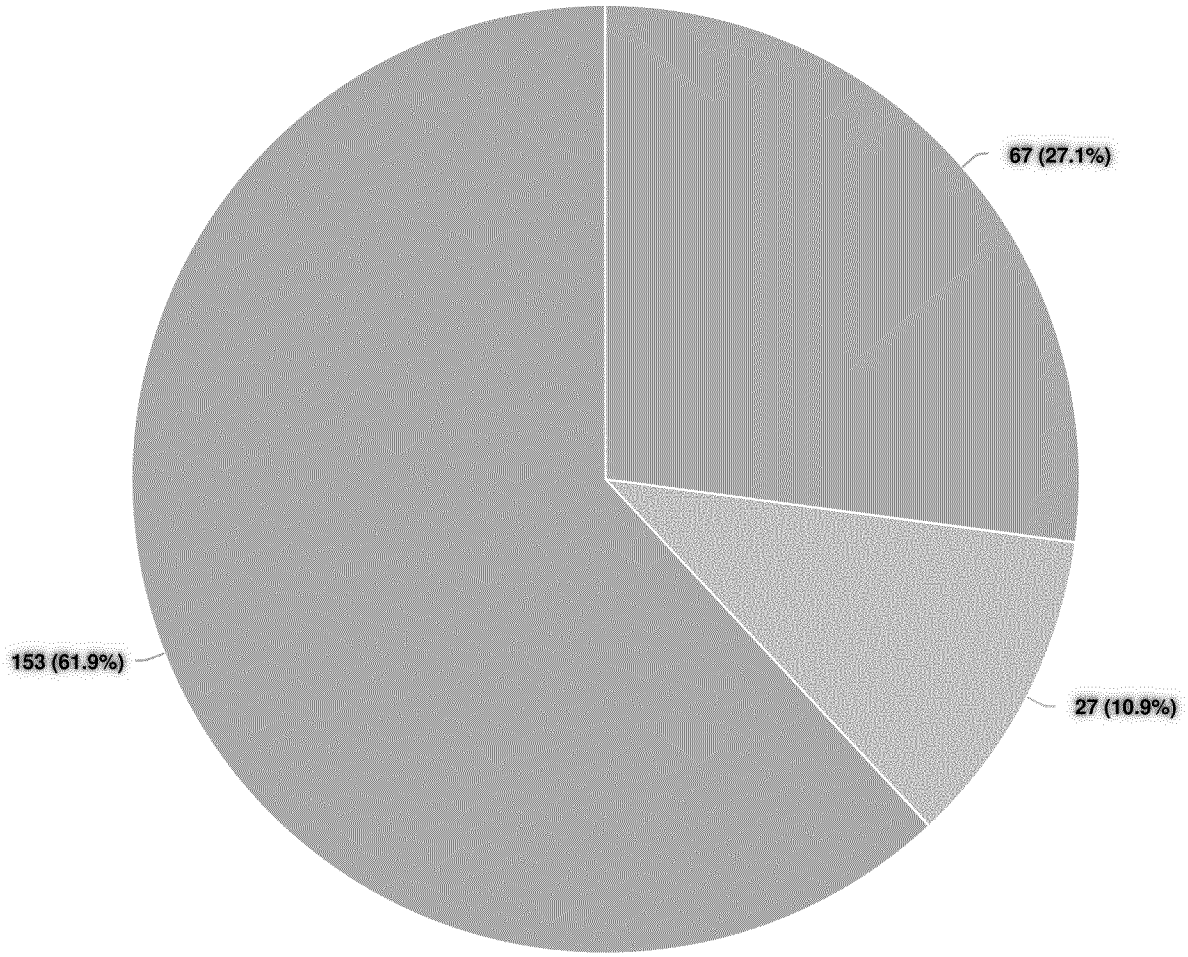


Question options

Support Neutral Do not support

Optional question (246 response(s), 1 skipped)
Question type: Radio Button Question

Q11 Consider allowing moderate density increases in single family zones to allow for duplex and triplexes.

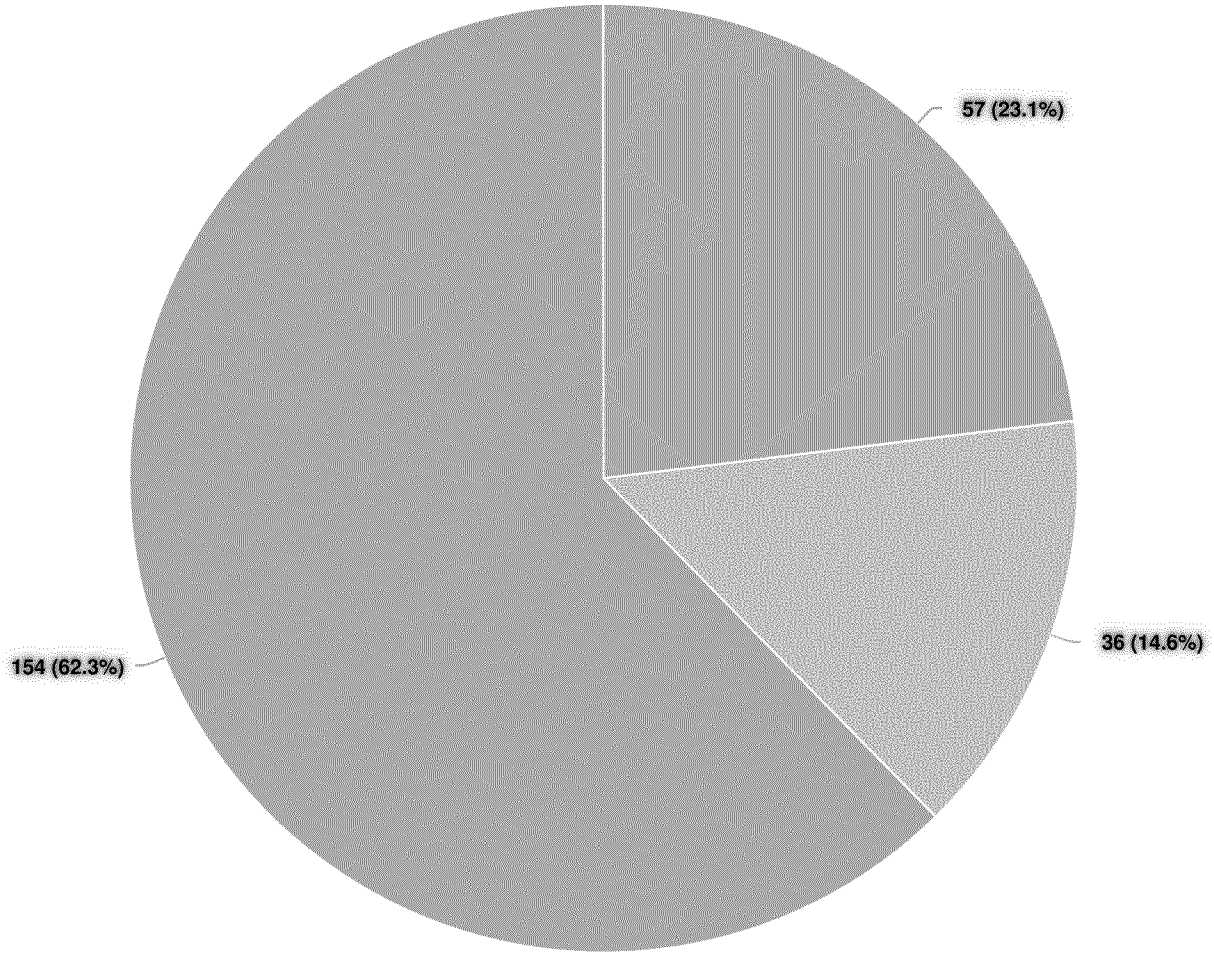


Question options

Support Neutral Do not support

Optional question (247 response(s), 0 skipped)
Question type: Radio Button Question

Q12 Develop pre-approved missing middle housing plan sets.

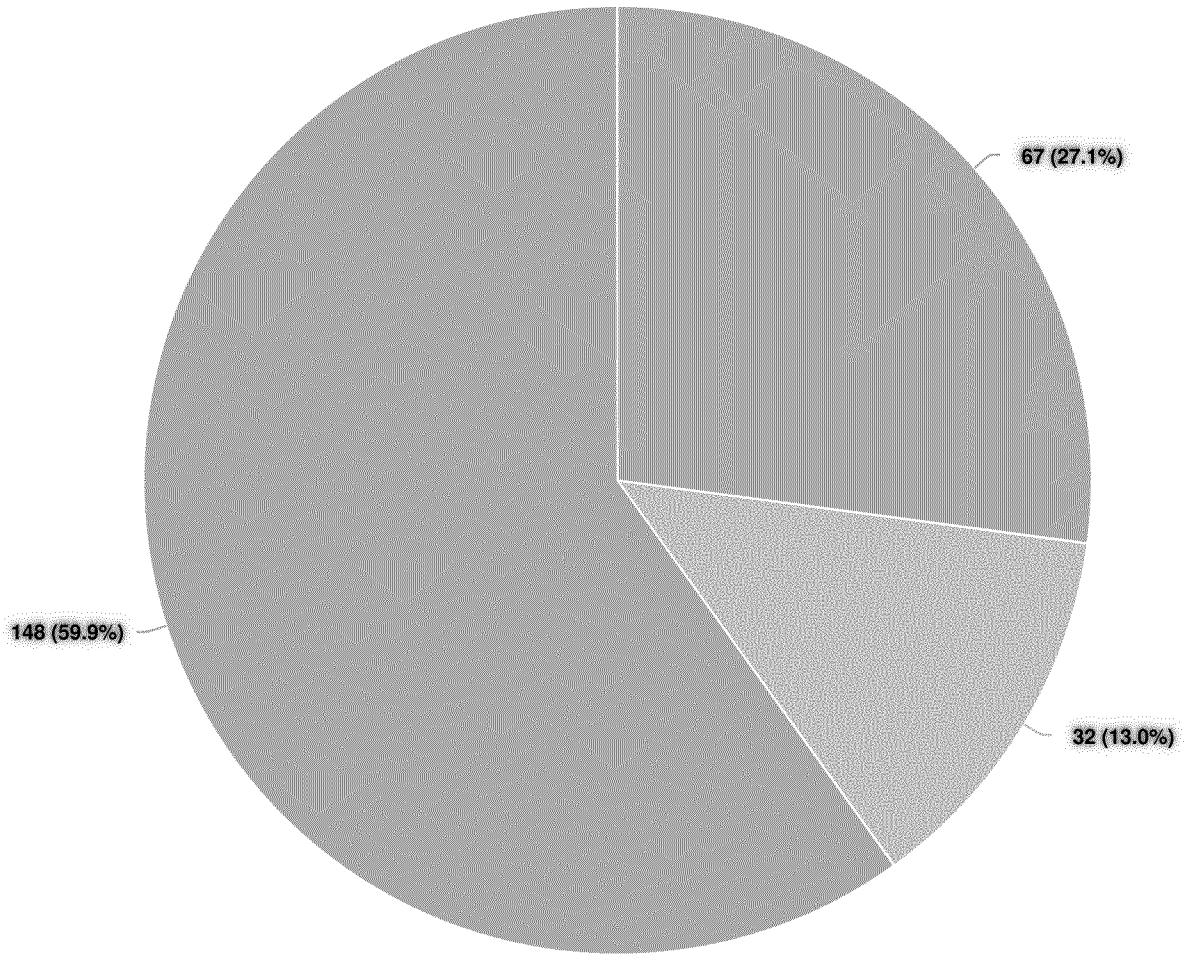


Question options

Support Neutral Do not support

Optional question (247 response(s), 0 skipped)
Question type: Radio Button Question

Q13 Identify locations for small-lot zoning and smaller housing units. (As part of the comprehensive plan consider evaluating residential land to support higher-density residential to allow greater housing options)



Question options

Support Neutral Do not support

Optional question (247 response(s), 0 skipped)
Question type: Radio Button Question

SUPPORT AND PROMOTE LOCAL AND REGIONAL AFFORDABLE HOUSING EFFORTS

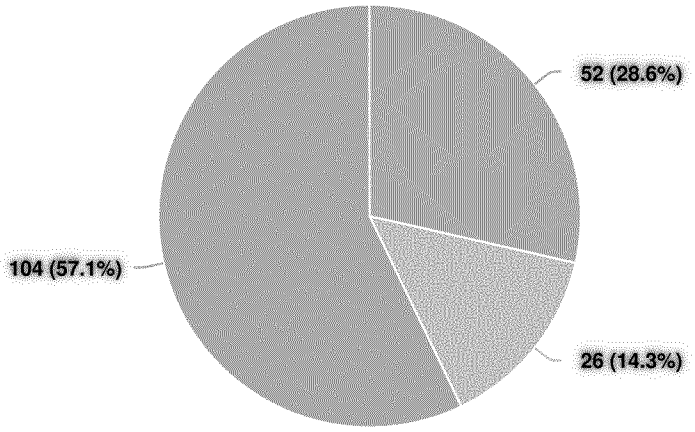
SURVEY RESPONSE REPORT
12 August 2019 - 07 April 2024

PROJECT NAME:
Housing Needs Assessment & Strategic Plan

BANG THE TABLE engagementHQ

SURVEY QUESTIONS

Q1 Partner with organizations such as Habitat for Humanity and Boulder County Housing Authority to support the creation of aff...

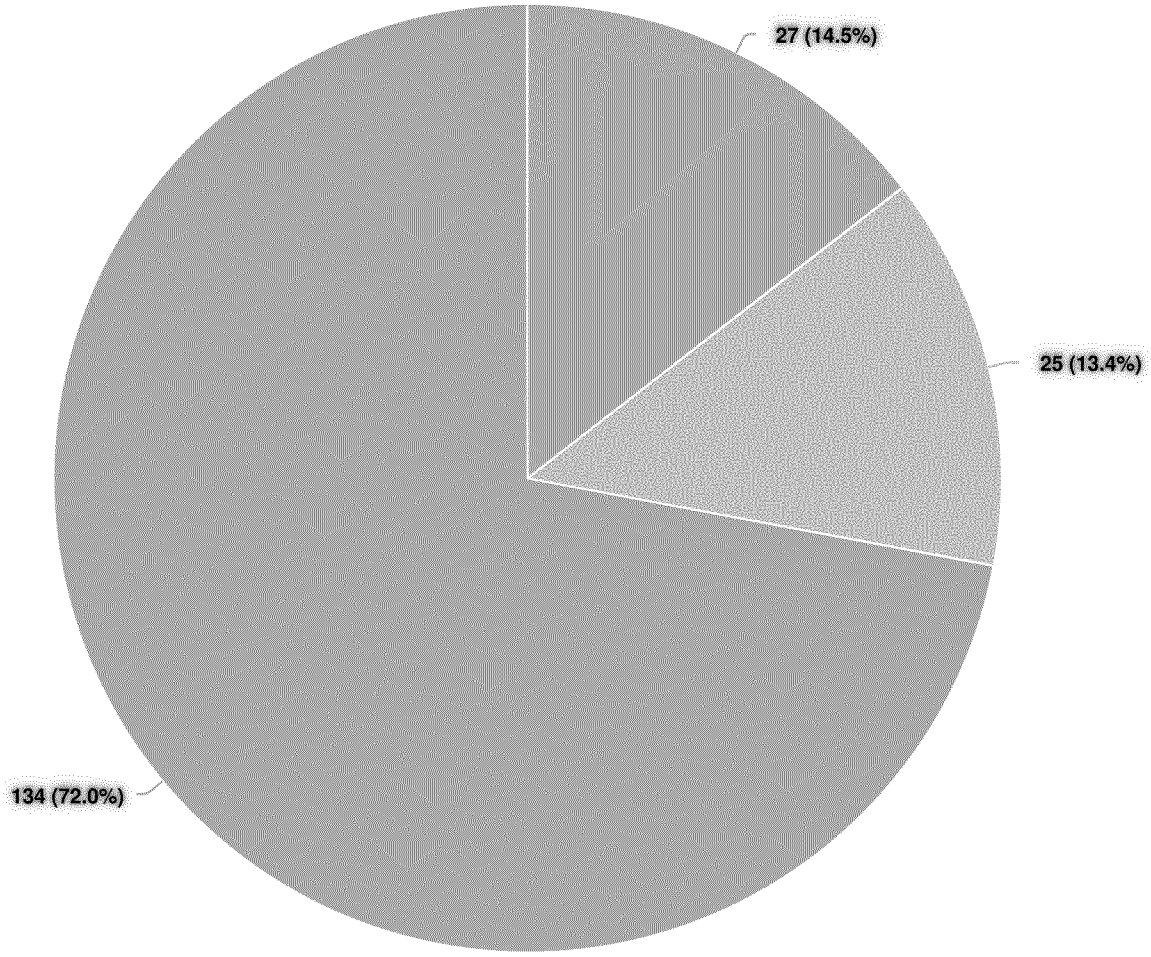


Question options

Support Neutral Do not support

Optional question (182 response(s), 4 skipped)
Question type: Radio Button Question

Q2 Density bonus.

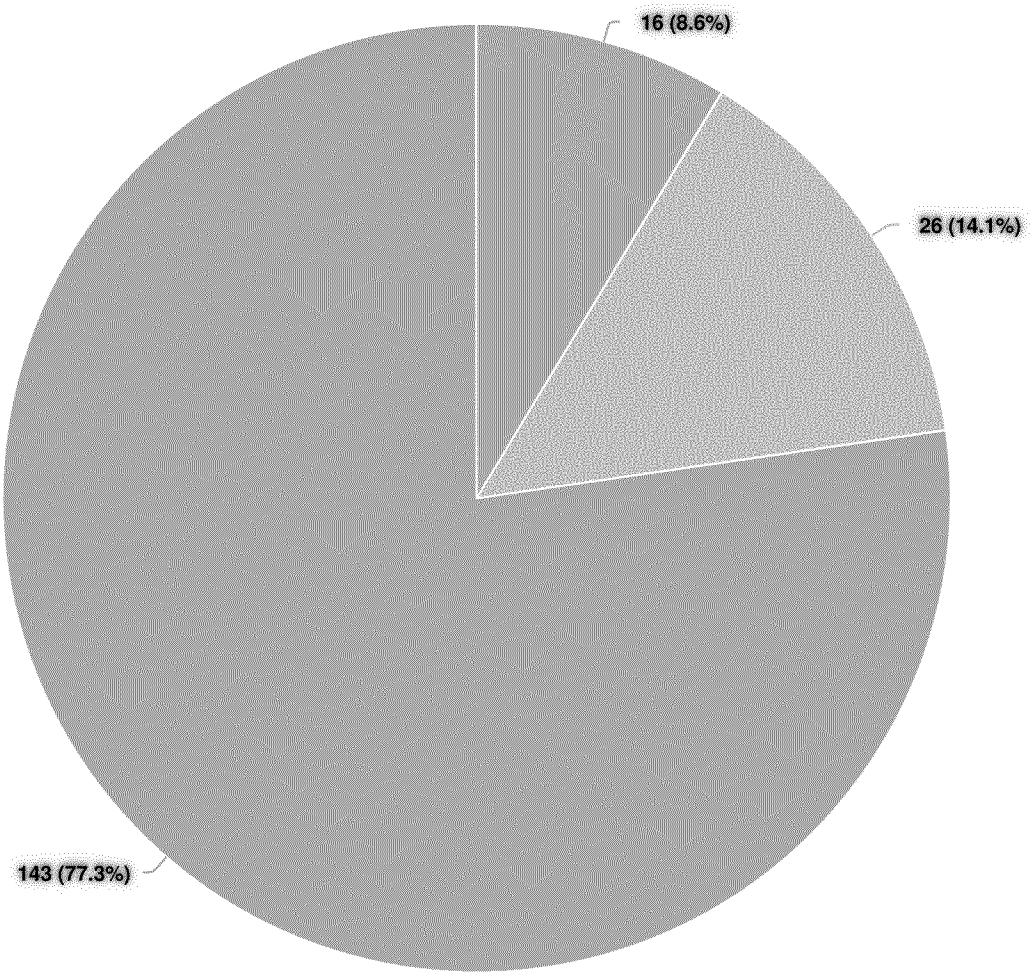


Question options

Support Neutral Do not support

Optional question (186 response(s), 0 skipped)
Question type: Radio Button Question

Q3 Height bonus.

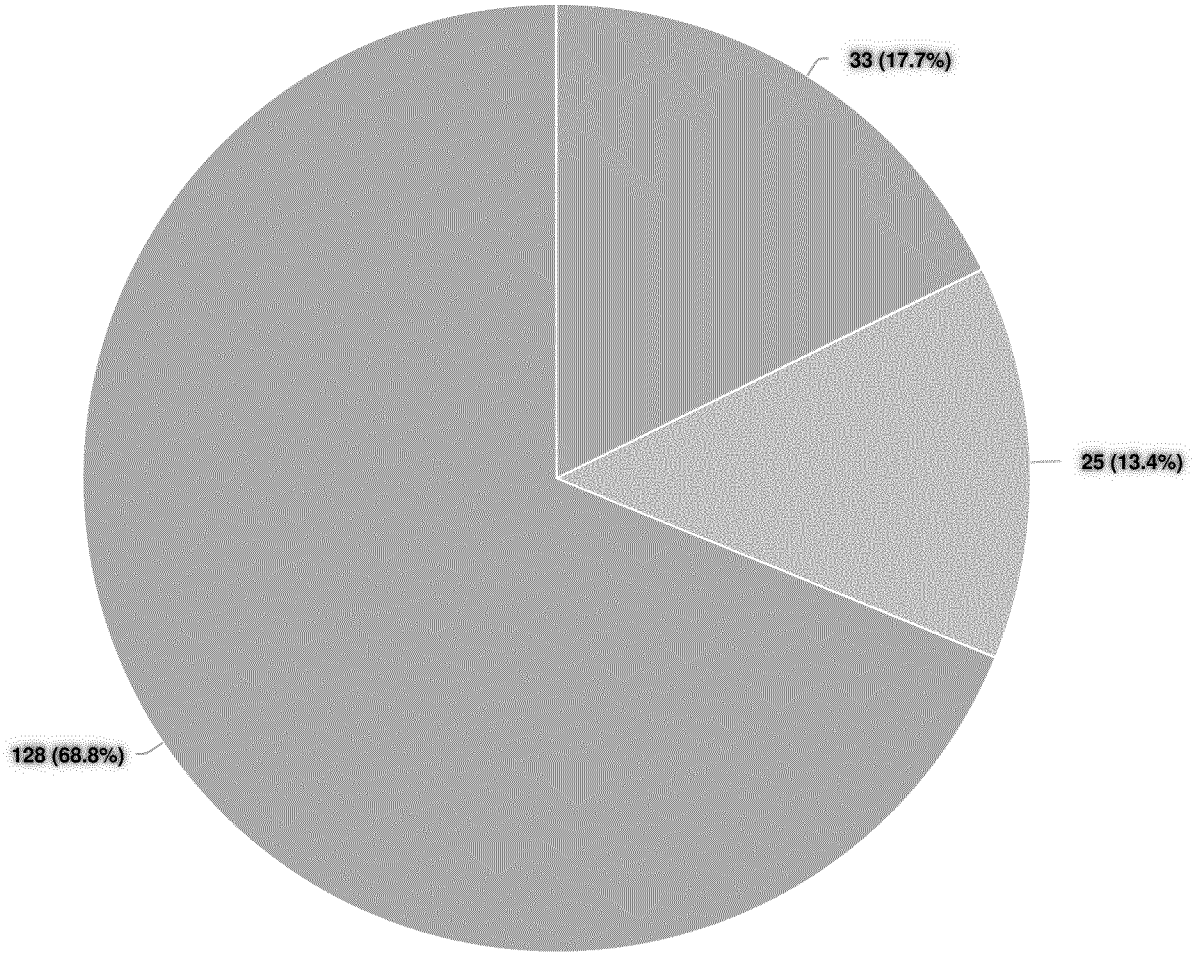


Question options

Support Neutral Do not support

Optional question (185 response(s), 1 skipped)
Question type: Radio Button Question

Q4 Expedited review for affordable housing projects.

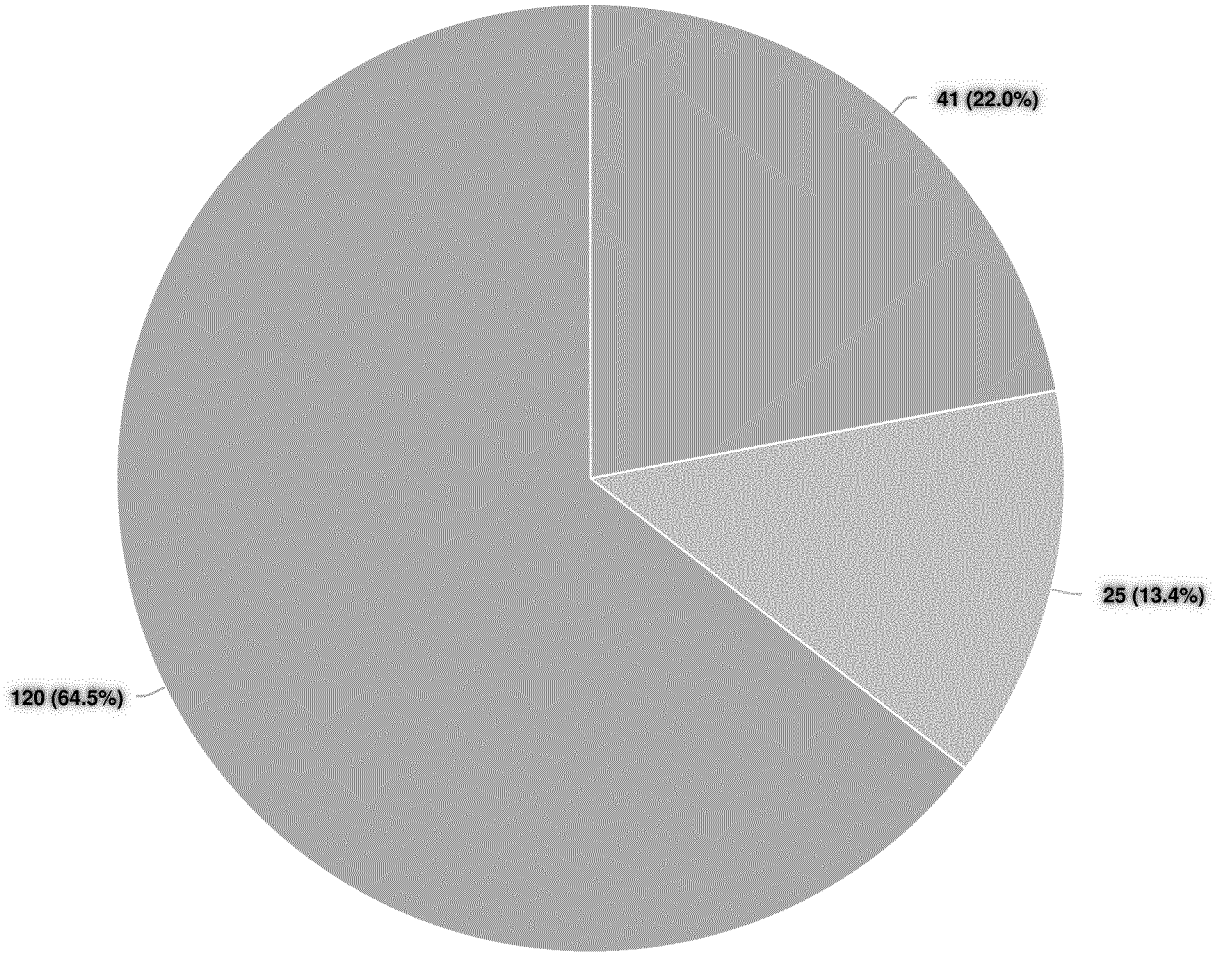


Question options

Support Neutral Do not support

Optional question (186 response(s), 0 skipped)
Question type: Radio Button Question

Q5 Subsidized or reduced fees for affordable housing projects.

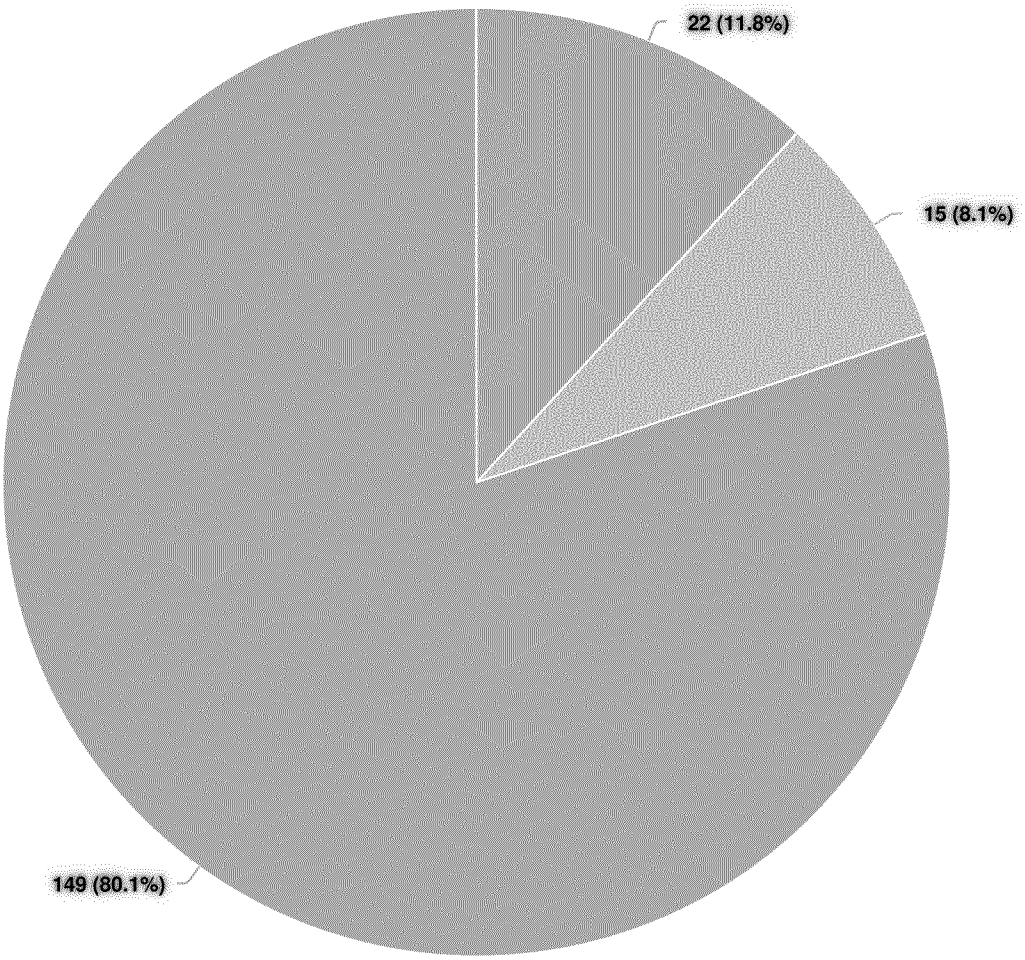


Question options

Support Neutral Do no support

Optional question (186 response(s), 0 skipped)
Question type: Radio Button Question

Q6 Create a land donation, land acquisition, or land banking program. (Town owns 15 acres of land with no future designated use currently)

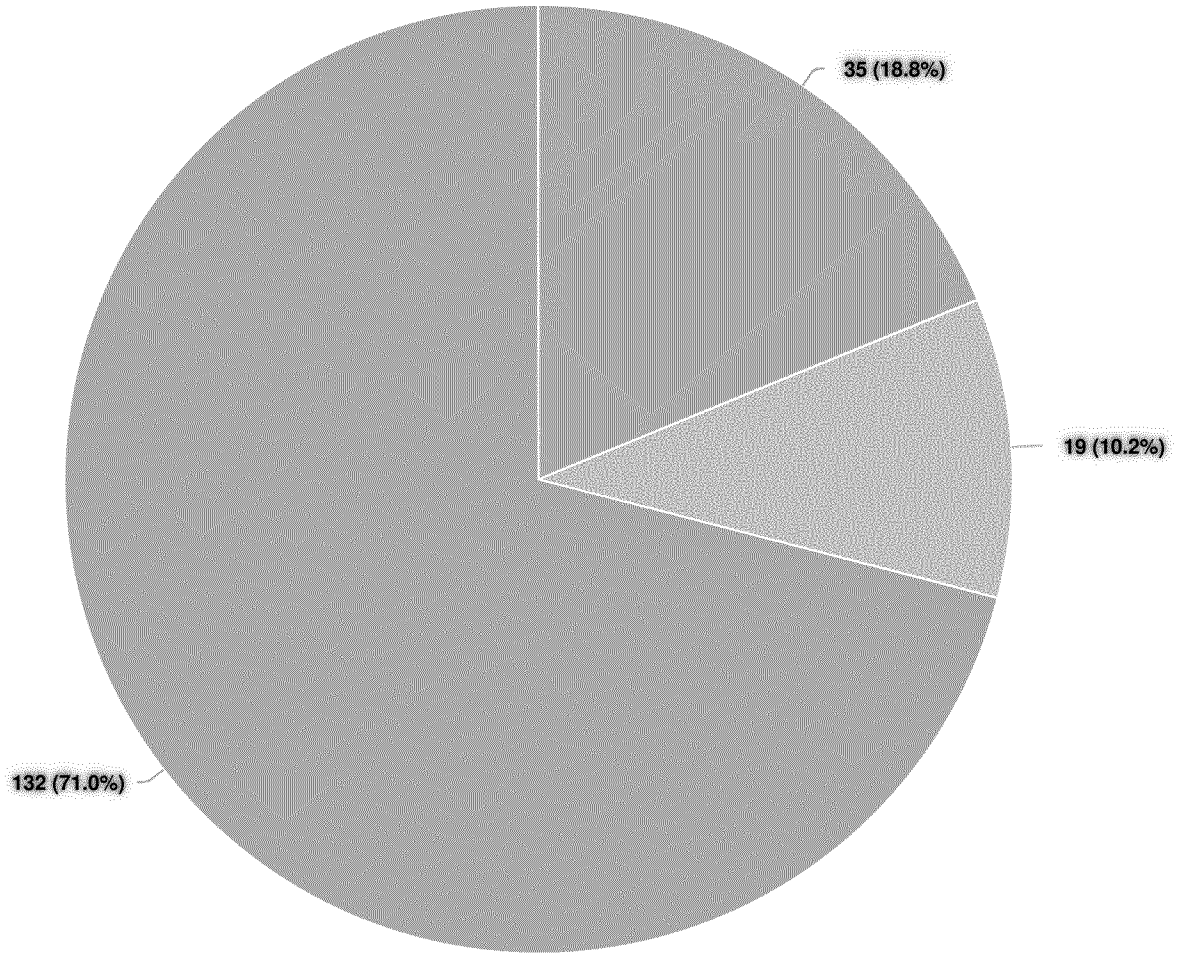


Question options

Support Neutral Do not support

Optional question (186 response(s), 0 skipped)
Question type: Radio Button Question

Q7 Partner with affordable housing providers to redevelop vacant or underutilized land for affordable housing.

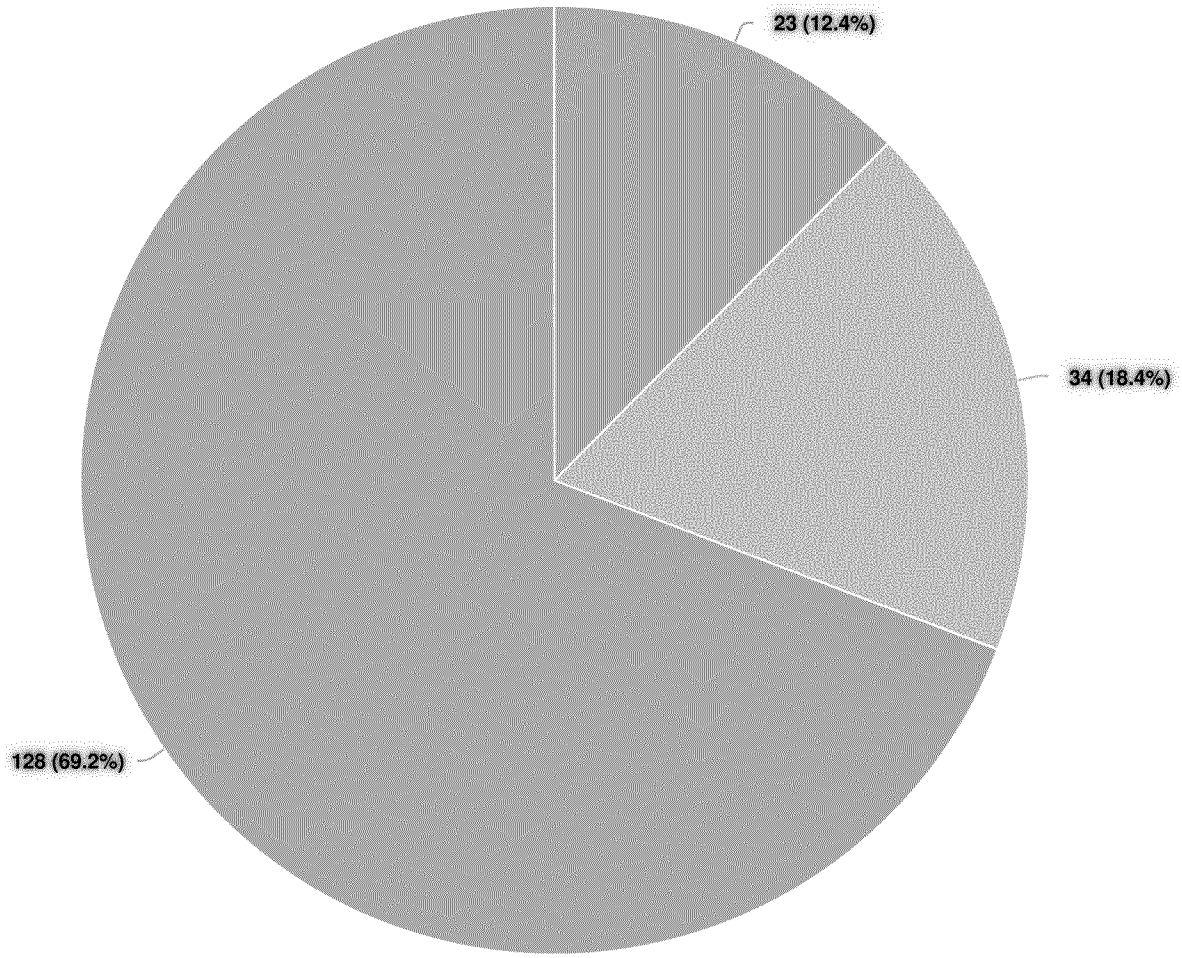


Question options

Support Neutral Do not support

Optional question (186 response(s), 0 skipped)
Question type: Radio Button Question

Q8 Explore the creation of a housing trust fund and other local revenue sources to fund a variety of affordable housing activities.

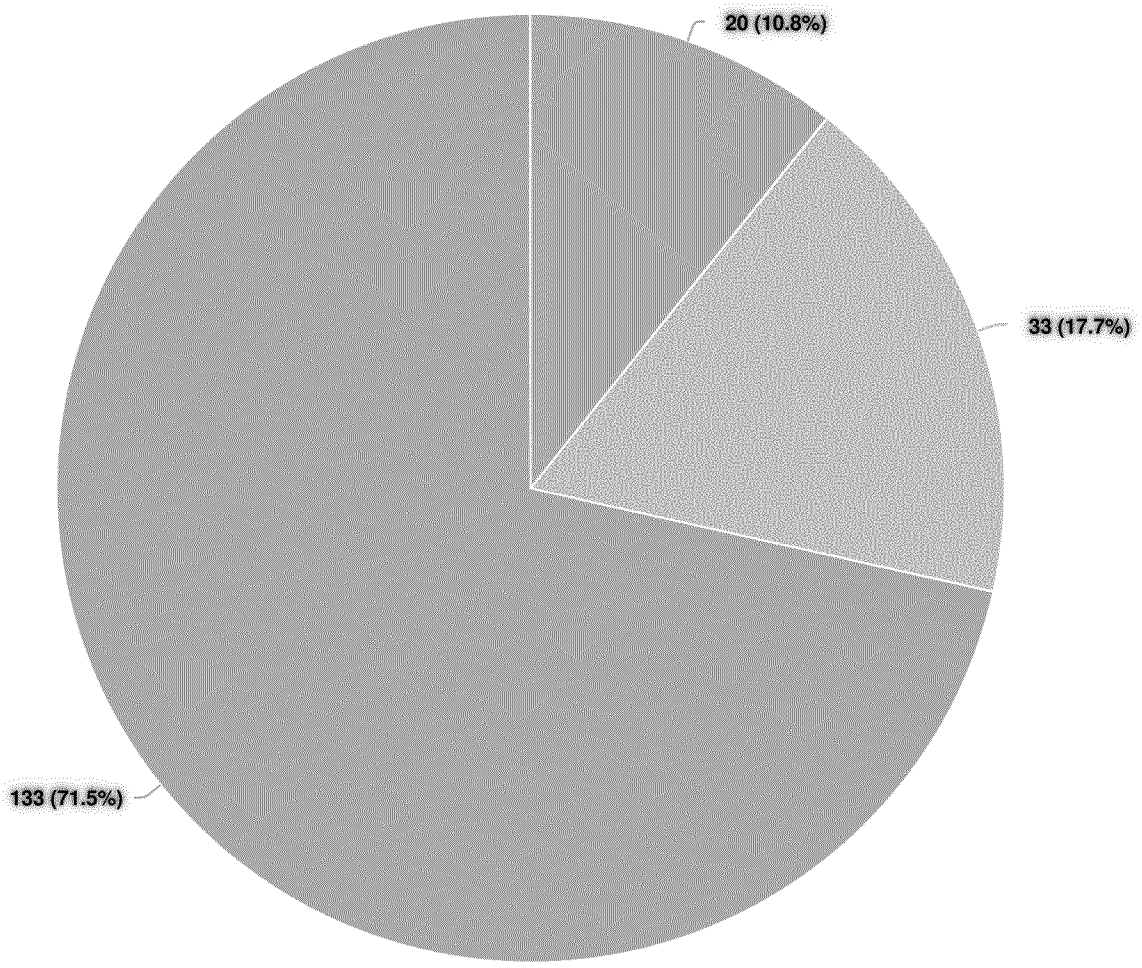


Question options

Support Neutral Do not support

Optional question (185 response(s), 1 skipped)
Question type: Radio Button Question

Q9 Explore the creation of a commercial/residential linkage fee to provide financial support for affordable housing projects.

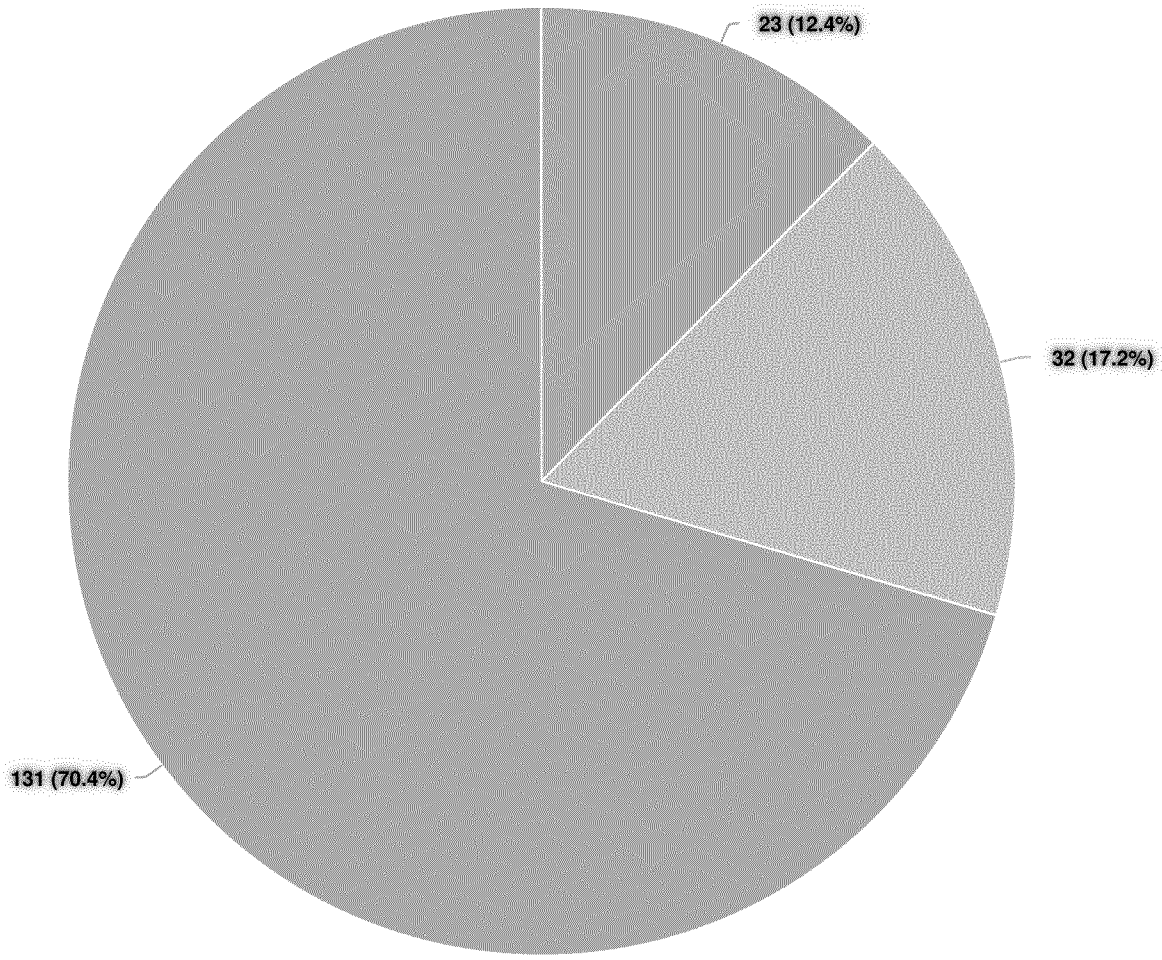


Question options

Support Neutral Do not support

Optional question (186 response(s), 0 skipped)
Question type: Radio Button Question

Q10 Establish the fee-in-lieu amounts as intended in the Inclusionary Housing Ordinance.



Question options

Support Neutral Do not support

Optional question (186 response(s), 0 skipped)
Question type: Radio Button Question

REMOVE HOUSING BARRIERS FOR PEOPLE WHO OFTER ENCOUNTER THEM.

SURVEY RESPONSE REPORT

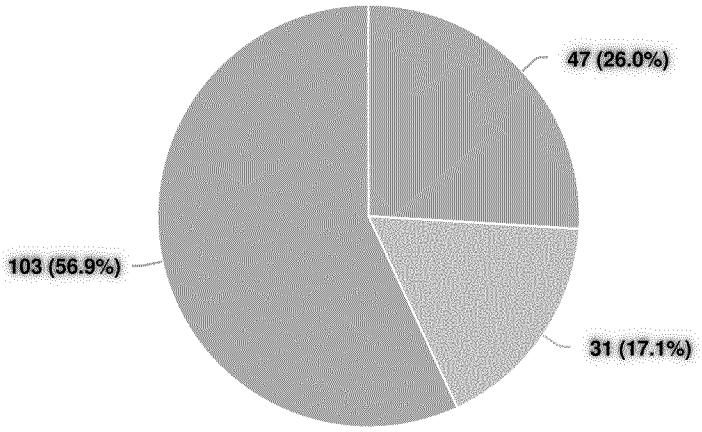
12 August 2019 - 07 April 2024

PROJECT NAME:
Housing Needs Assessment & Strategic Plan

BANG THE TABLE engagementHQ

SURVEY QUESTIONS

Q1 Modify or increase the three unrelated people occupancy cap to create greater housing choices for renters.

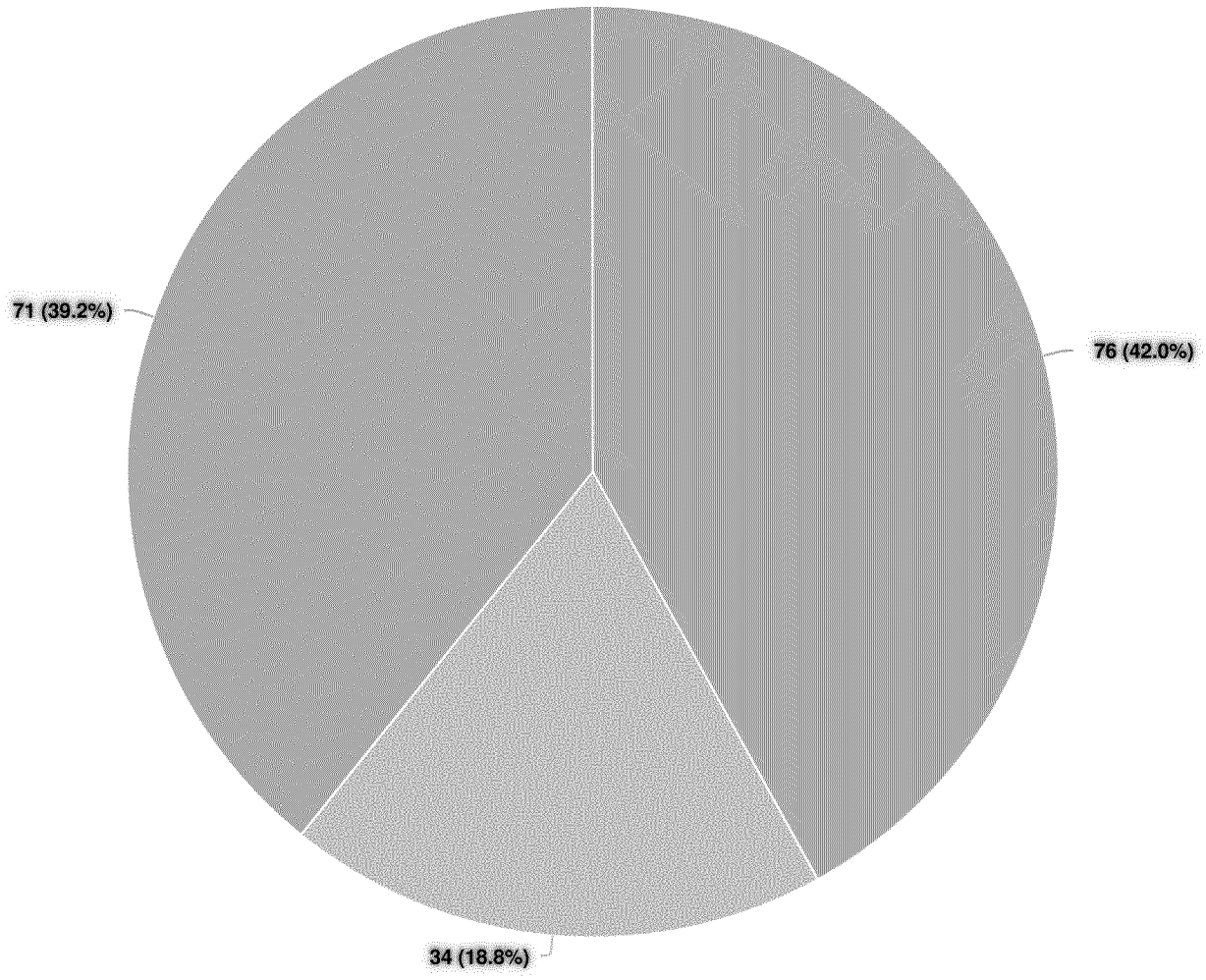


Question options

Support Neutral Do not support

Optional question (181 response(s), 0 skipped)
Question type: Radio Button Question

Q2 Incentivize or explore existing programs (Boulder-Longmont Accessibility Program) that makes a home more accessible for income and asset-qualified renters or homeowners with a disabled or elderly family member.

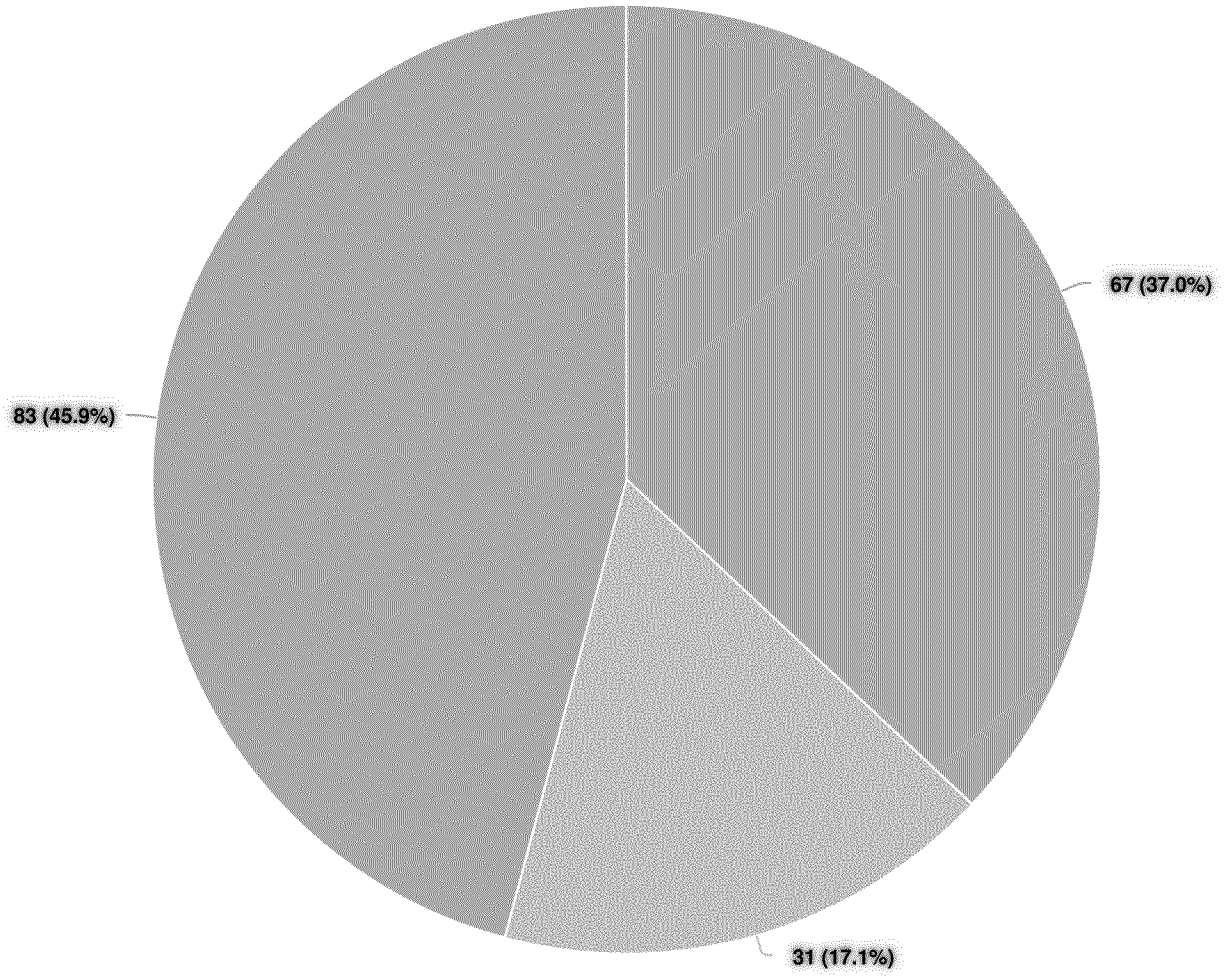


Question options

Support Neutral Do not support

Optional question (181 response(s), 0 skipped)
Question type: Radio Button Question

Q3 Explore land use policy changes during the Comprehensive Plan to support the development of new housing for seniors.

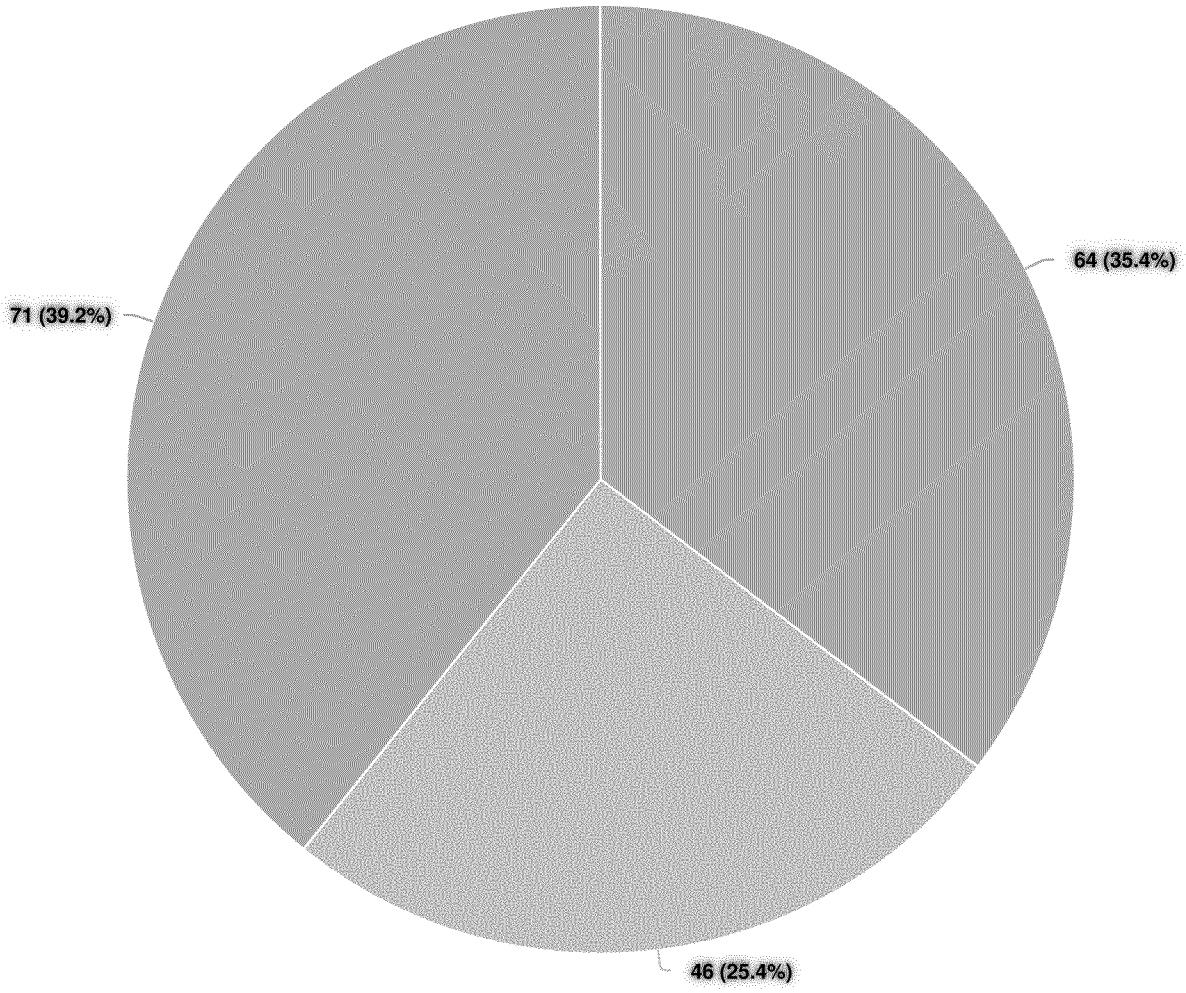


Question options

Support Neutral Do not support

Optional question (181 response(s), 0 skipped)
Question type: Radio Button Question

Q4 Explore incentive programs and partnerships that promote the creation of senior housing.

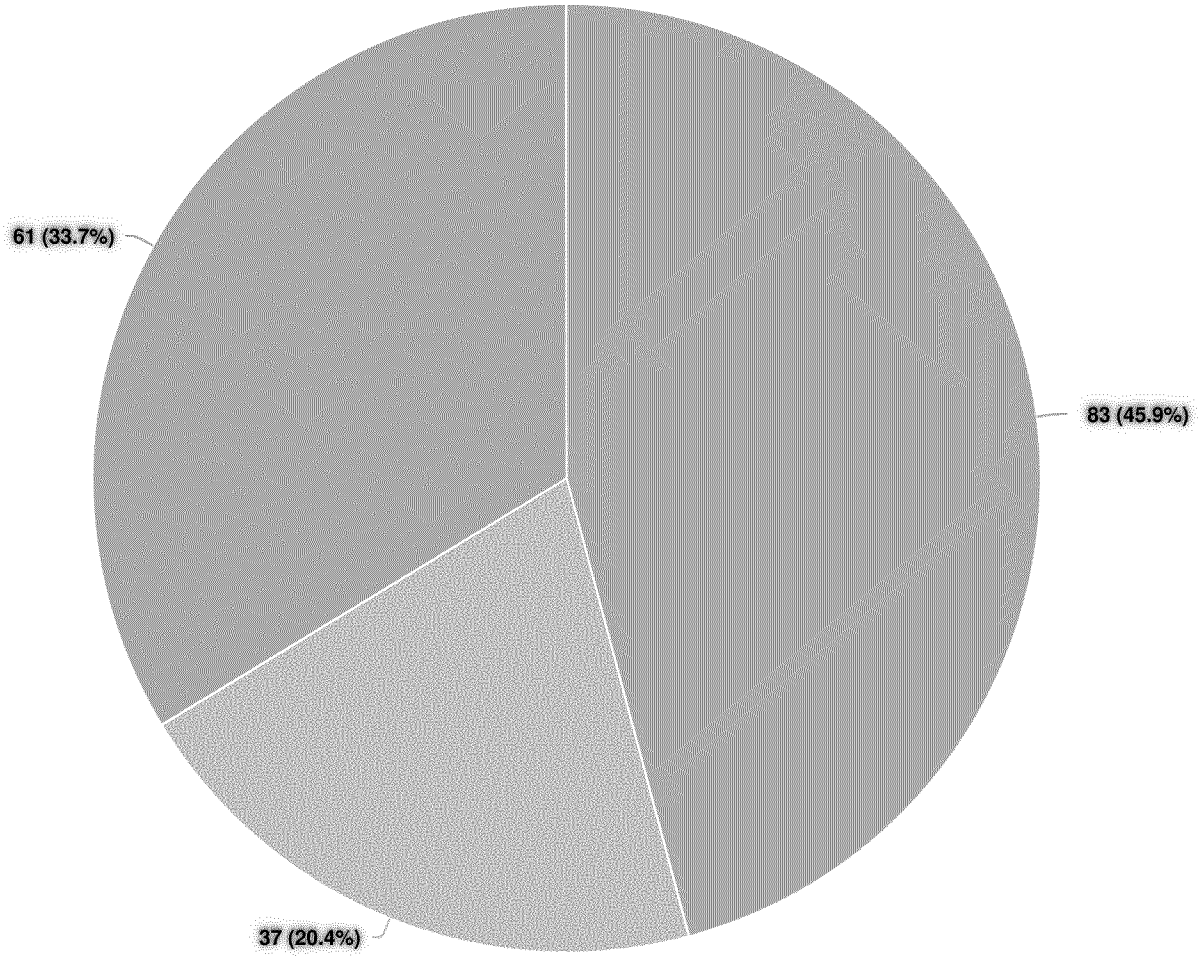


Question options

Support Neutral Do not support

Optional question (181 response(s), 0 skipped)
Question type: Radio Button Question

Q5 Support programs and organizations that assist older adults with their housing needs.

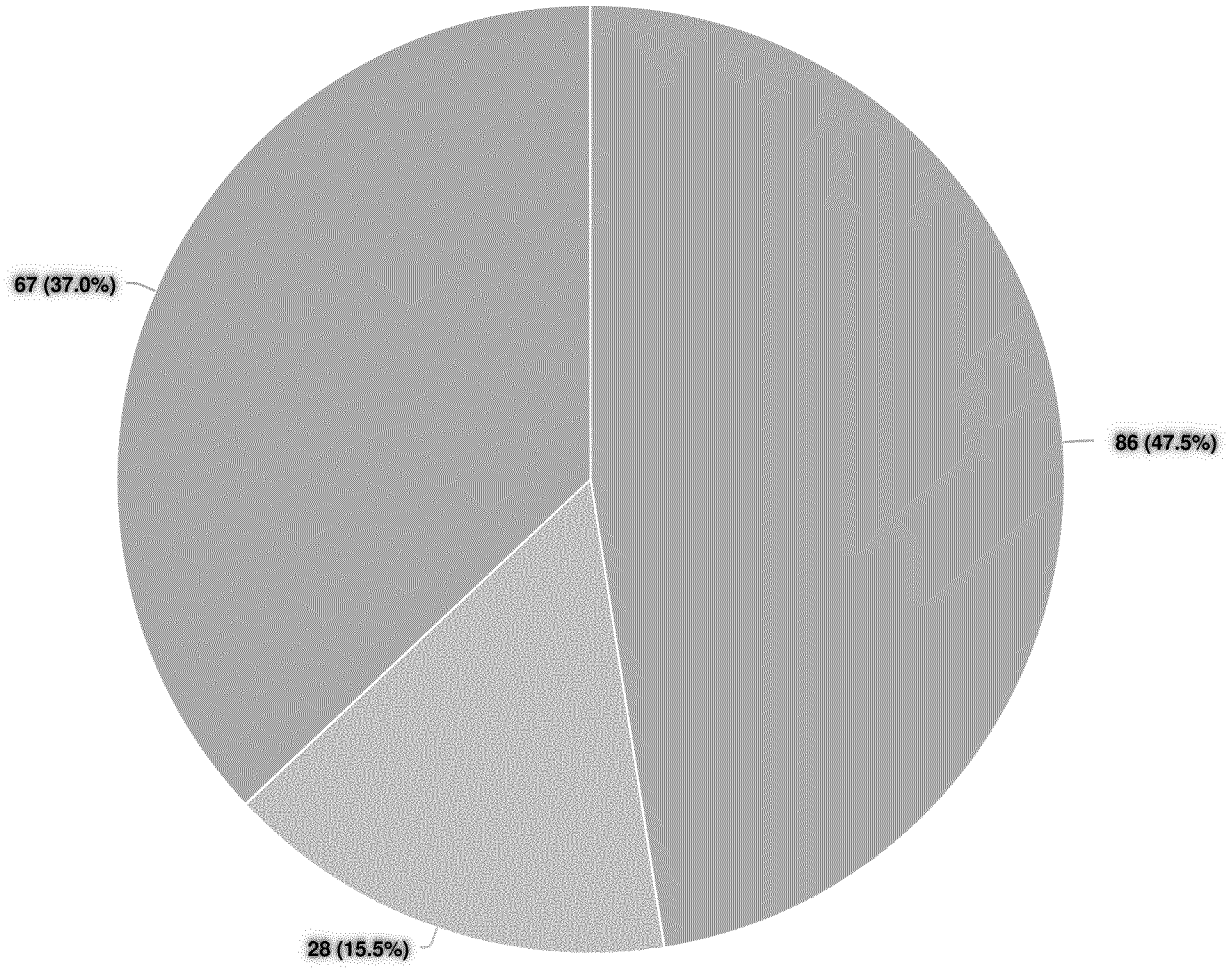


Question options

Support Neutral Do not support

Optional question (181 response(s), 0 skipped)
Question type: Radio Button Question

Q6 Promote weatherization assistance programs that help low-income residents with energy-saving repairs.

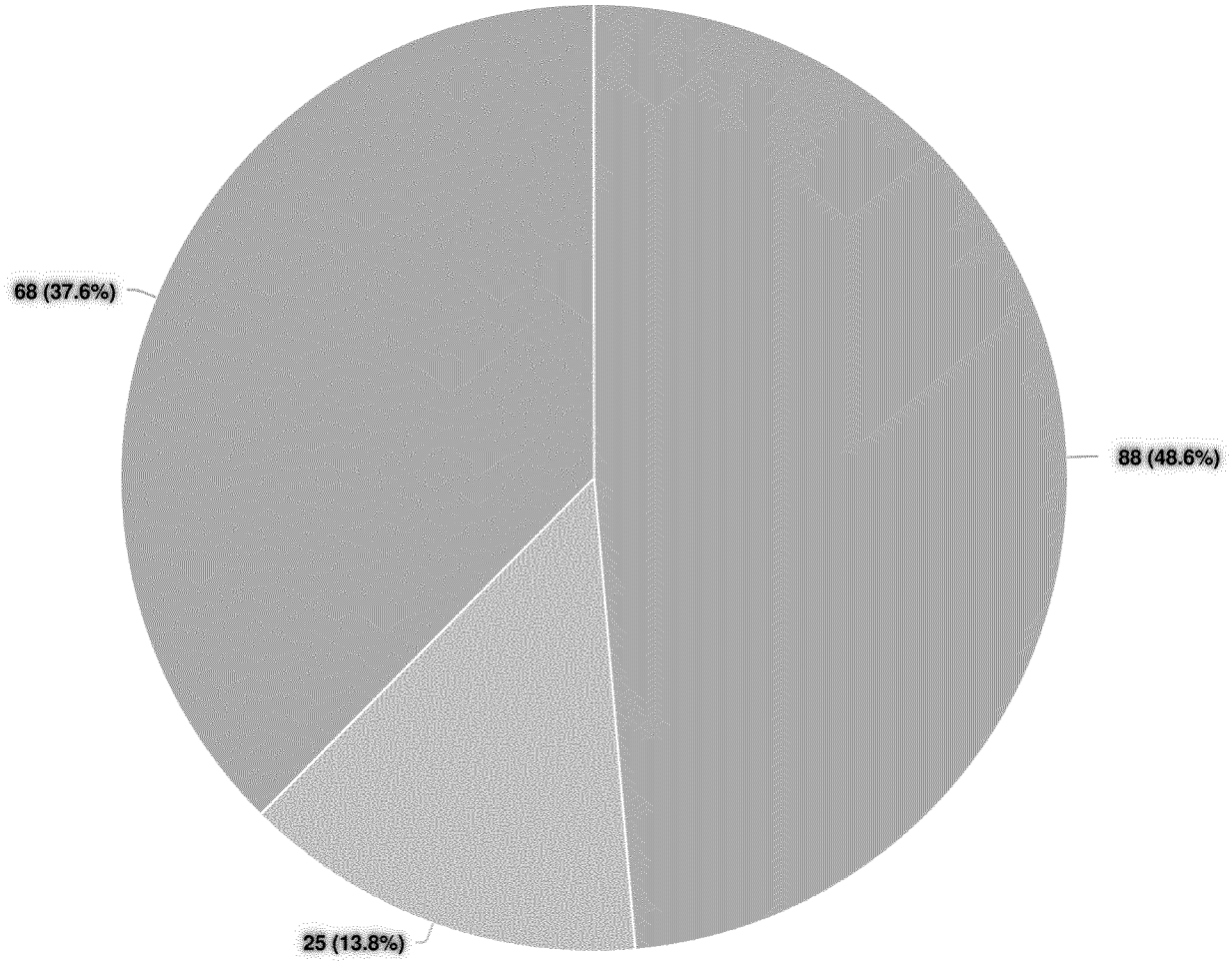


Question options

Support Neutral Do not support

Optional question (181 response(s), 0 skipped)
Question type: Radio Button Question

Q7 Explore programs and partnerships, such as the Boulder-Longmont Housing Rehabilitation Program, to support housing rehabilitation to help income and asset-qualified homeowners fix problems in their homes such as roofing, plumbing, heating, electric...

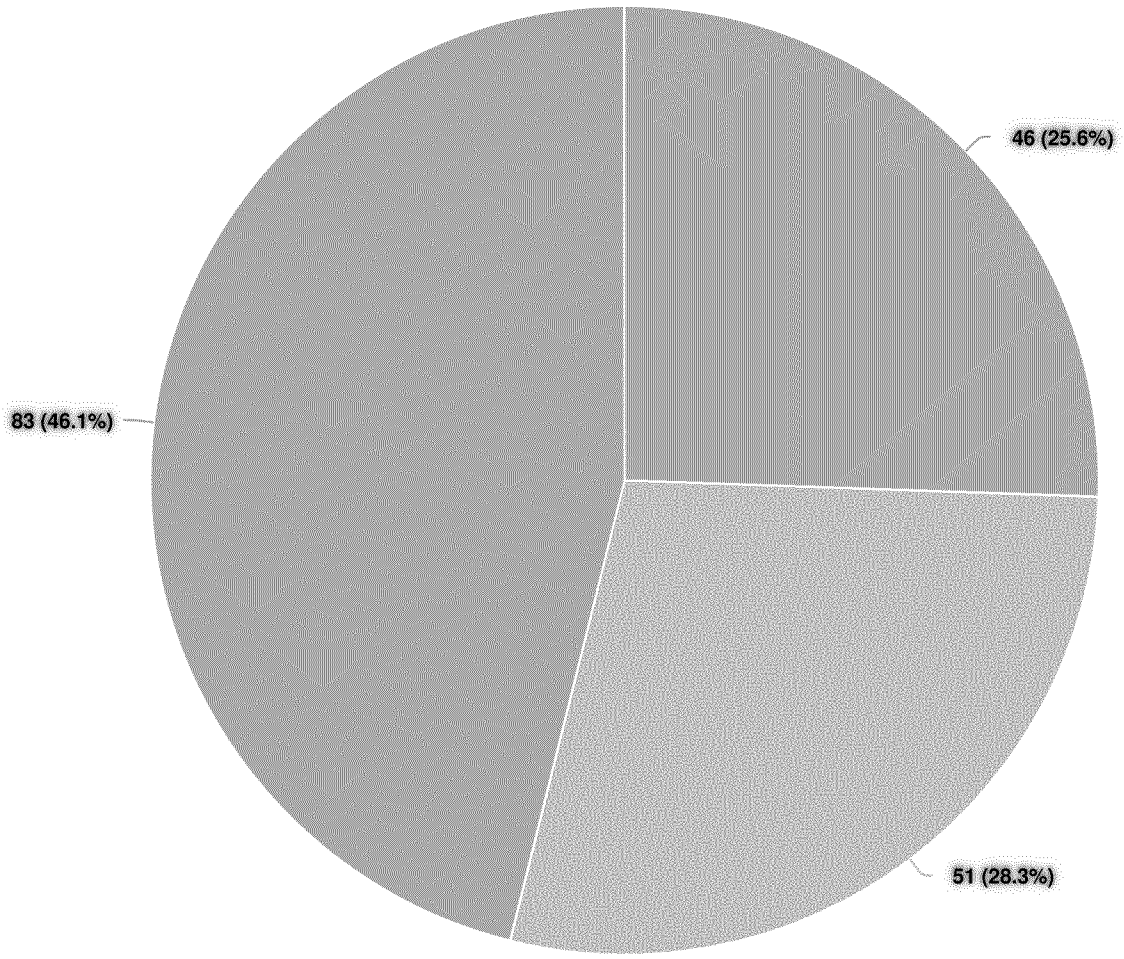


Question options

Support Neutral Do not support

Optional question (181 response(s), 0 skipped)
Question type: Radio Button Question

Q8 Support and/or partner with mission-driven affordable housing providers, such as Trailhead Community to provide affordable housing for people with intellectual disabilities in the Town or region.

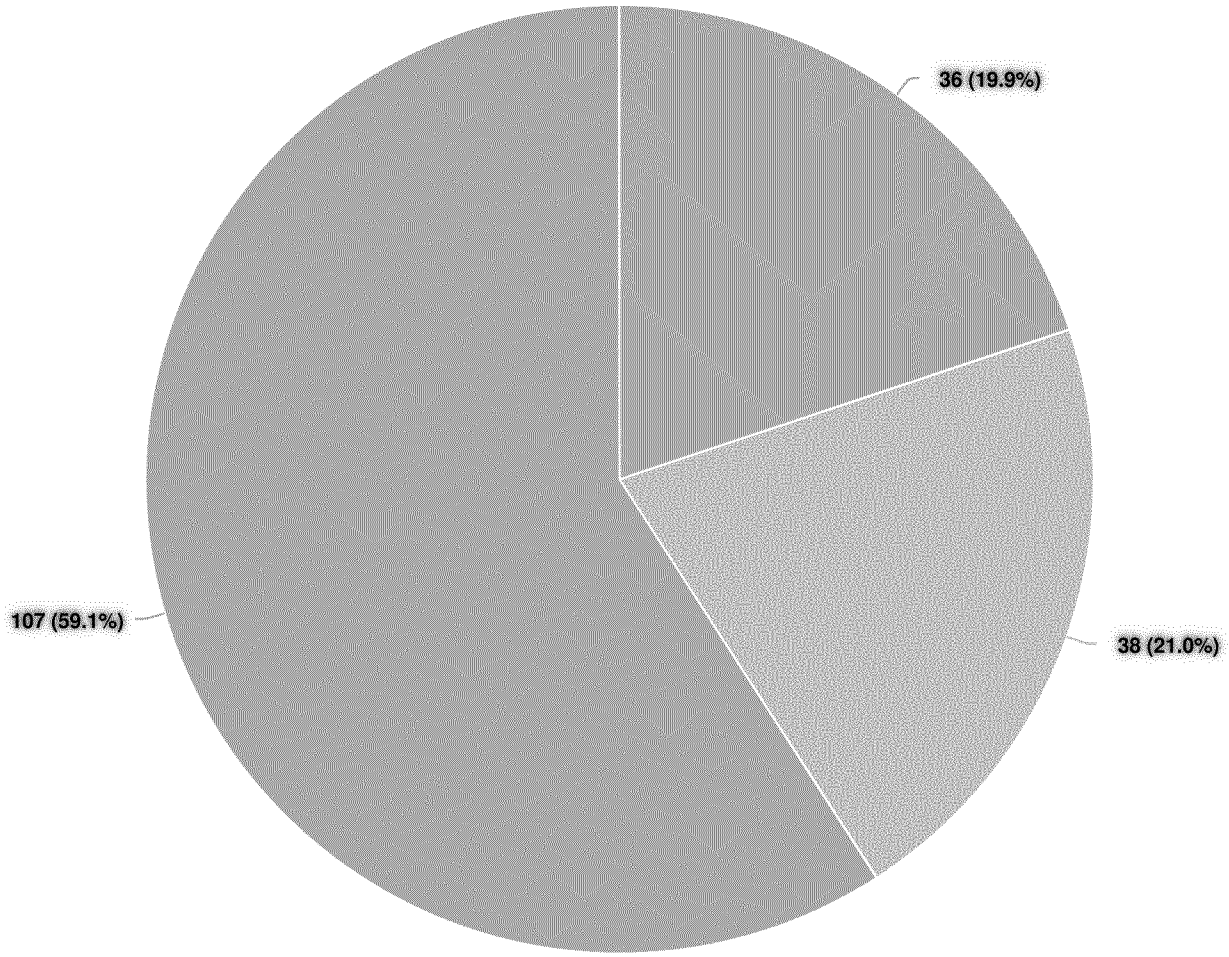


Question options

Support Neutral Do not support

Optional question (180 response(s), 1 skipped)
Question type: Radio Button Question

Q9 Evaluate the Town's Group Homes regulations to identify barriers to group home development.

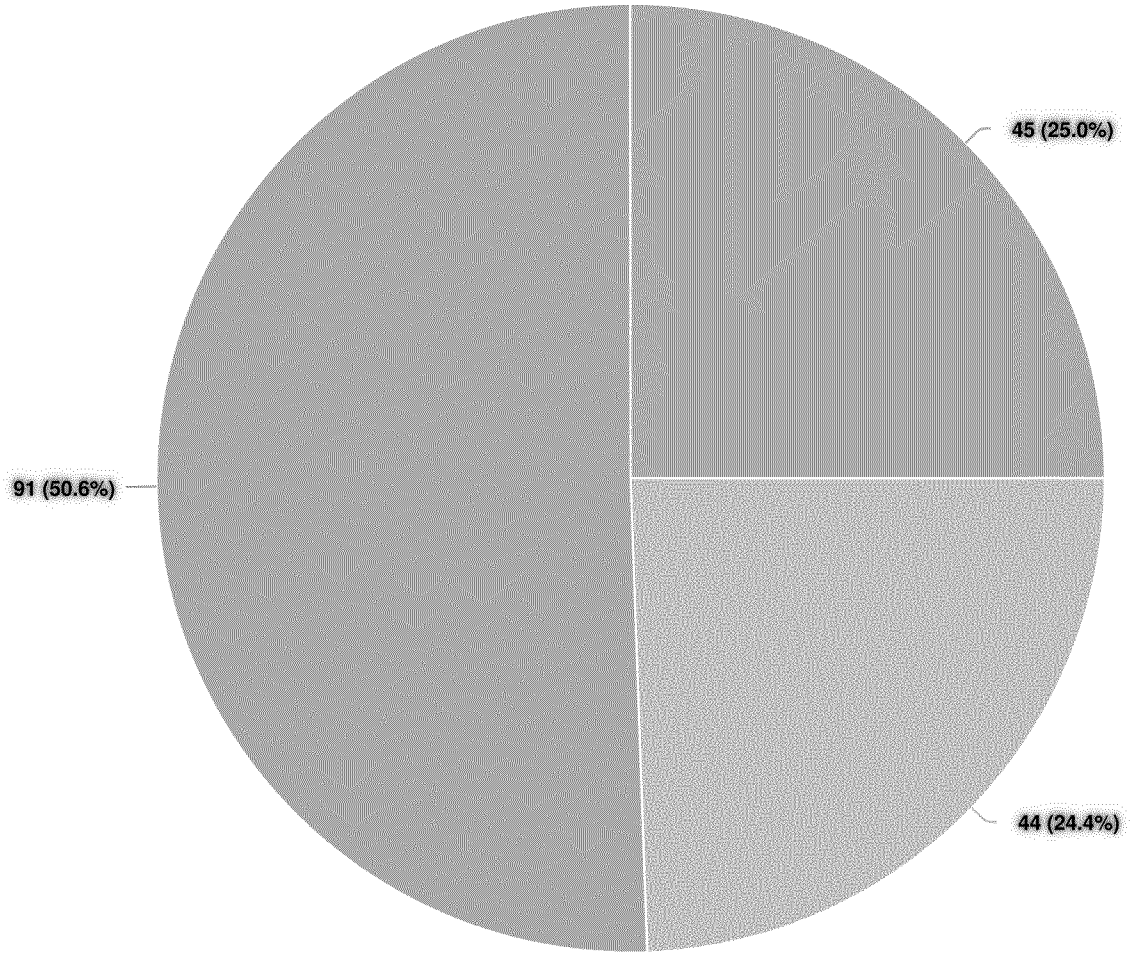


Question options

Support Neutral Do not support

Optional question (181 response(s), 0 skipped)
Question type: Radio Button Question

Q10 Support programs and organizations that assist IDD with their housing needs.

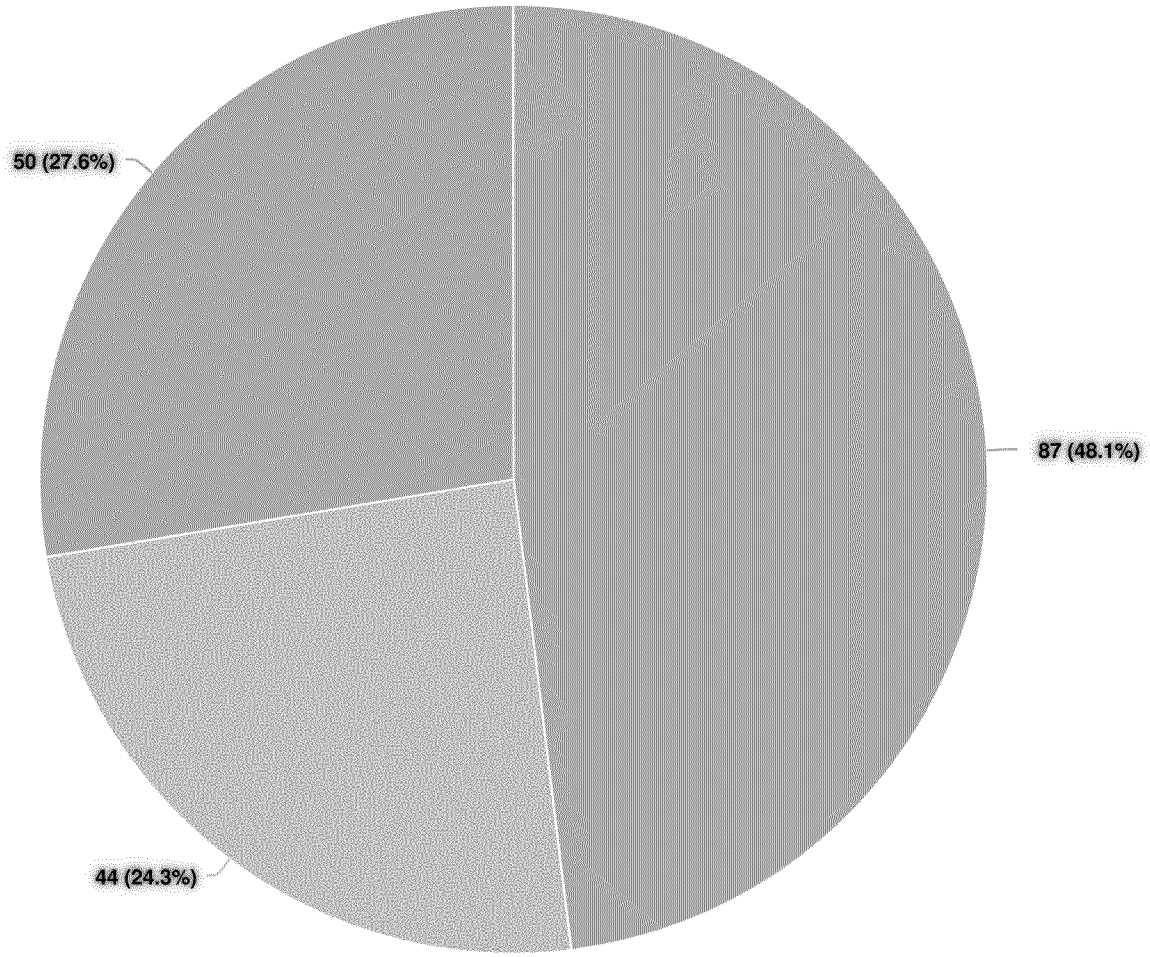


Question options

Support Neutral Do not support

Optional question (180 response(s), 1 skipped)
Question type: Radio Button Question

Q11 Create a centralized Town webpage that provides links to regional housing provider programs that serve Superior residents.

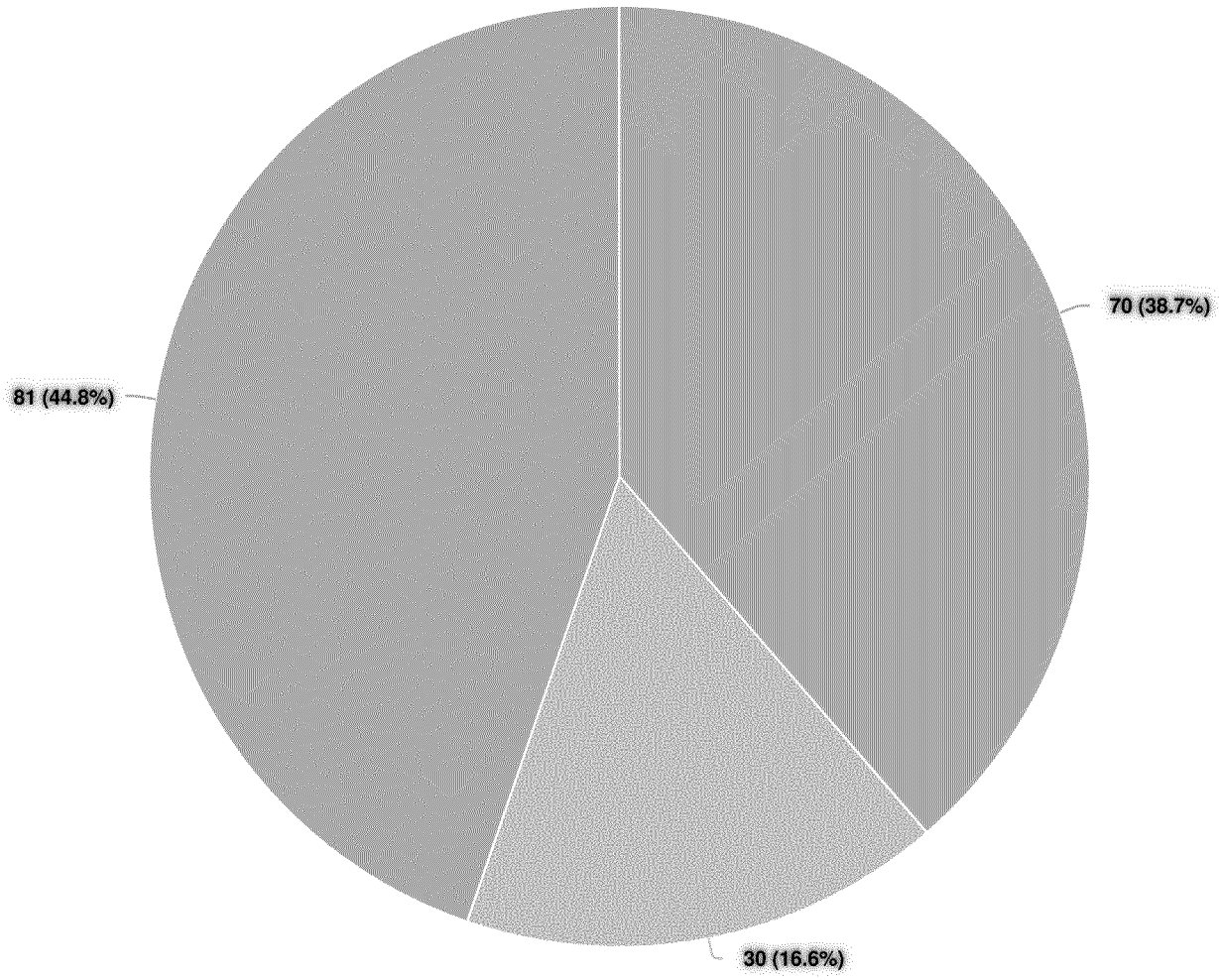


Question options

Support Neutral Do not support

Optional question (181 response(s), 0 skipped)
Question type: Radio Button Question

Q12 Advocate for and support existing regional and state tenant protection programs that serve to improve outcomes for renters such as:Provide ample notice periods for rent increases; lease terminations; and the need to vacate due to renovations.Prohib...

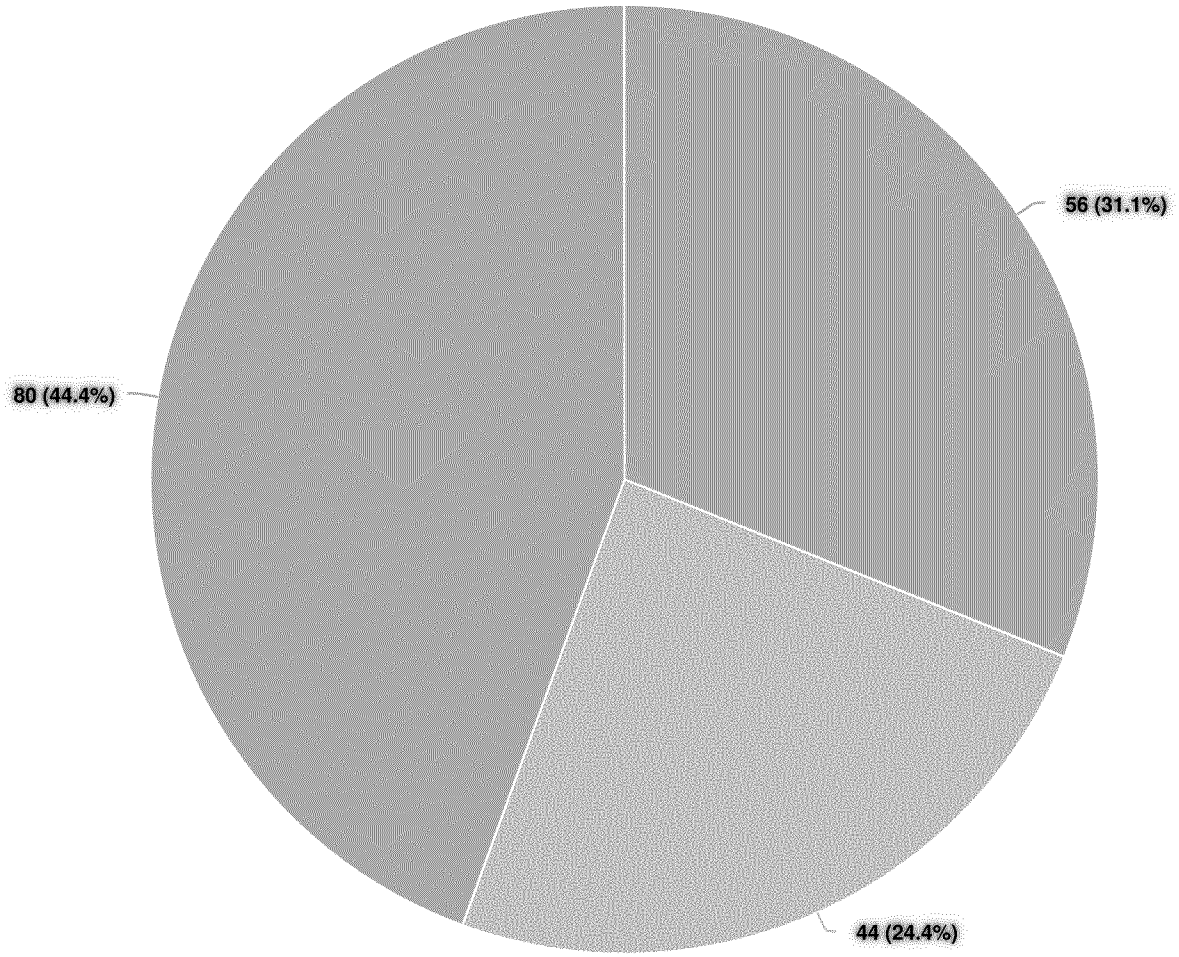


Question options

Support Neutral Do not support

Optional question (181 response(s), 0 skipped)
Question type: Radio Button Question

Q13 Form partnerships and work with culturally specific organizations to promote the availability of programs, incentives, and housing availability.

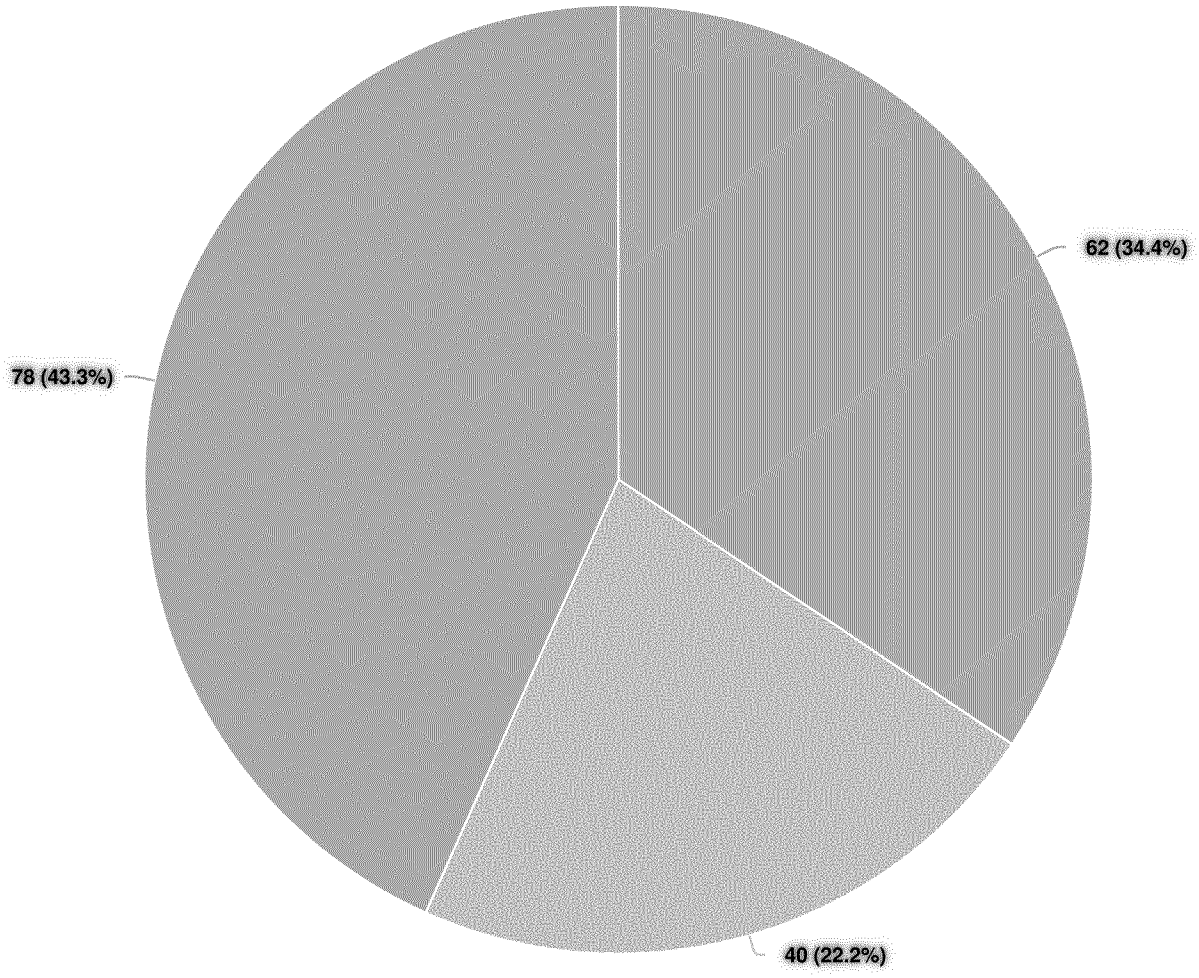


Question options

Support Neutral Do not support

Optional question (180 response(s), 1 skipped)
Question type: Radio Button Question

Q14 Remove language barriers in accessing housing resources and information by using technological solutions and/or partnering with culturally specific organizations.



Question options

Support Neutral Do not support

Optional question (180 response(s), 1 skipped)
Question type: Radio Button Question

The following tables reflect the degree of public support of the draft strategies. Each table includes the draft Actions that accompany each Objective. Residents were asked if they supported the action, were neutral on the action, or did not support the action. The columns reflect the total counts, along with percentages. The actions are then sorted by degree of support, with those receiving the most support at the top of the page. The final column indicates the actions that received positive or neutral support overall which are colored in shades of green, and those that did not receive support, colored in shades of blue.

1. Increase Housing Choices for People									
Draft Action	**Total Yes (count)**	**Total Yes (%)**	**Total Neutral (count)**	**Total Neutral (%)**	**Total Yes + Neutral (count)**	**Total Yes + Neutral (%)**	**Total No (count)**	**Total No (%)**	**Total Yes + Neutral - Total No**
Establish clear and objective development standards for new housing in newly established neighborhoods.	206	52%	67	17%	273	69%	120	31%	153
Review and clarify ADU development standards to make it easier to develop this housing type.	165	41%	62	16%	227	57%	172	43%	55
Explore allowing ADU's town wide.	156	39%	62	16%	218	55%	178	45%	40
Develop pre-approved ADU housing plan sets to streamline review process and development of this housing type.	141	36%	76	19%	217	55%	180	45%	37
As part of the comprehensive plan consider evaluating residential land to support higher-density residential by allowing smaller lot zoning and smaller housing units	117	29%	47	12%	164	41%	237	59%	-73
Develop pre-approved missing middle housing plan sets.	97	25%	55	14%	152	38%	243	62%	-91
Consider allowing moderate density increases in single family zones to allow for duplex and triplexes.	116	29%	38	9%	154	38%	247	62%	-93
Explore incentives for ADU's and tie it to affordability requirements such as deed-restrictions.	83	21%	66	17%	149	38%	243	62%	-94
Evaluate minimum lot size, setbacks, lot coverage, and design standards to allow for increased density across all zones and existing planned developments (PD's).	88	22%	43	11%	131	33%	262	67%	-131
Evaluate parking reductions for housing types and analyze the modification of on-street parking.	79	20%	52	13%	131	33%	265	67%	-134
Explore reducing minimum parking requirements for missing middle housing, multifamily, mixed-use, senior housing, and ADU's.	80	20%	49	12%	129	32%	269	68%	-140
Establish thresholds for development types that could be approved administratively without a Town Board or public hearing meeting to support state housing legislation.	52	13%	48	12%	100	26%	291	74%	-191

2. Support and Promote Local and Regional Affordable Housing Efforts									
Draft Action	**Total Yes (count)**	**Total Yes (%)**	**Total Neutral (count)**	**Total Neutral (%)**	**Total Yes + Neutral (count)**	**Total Yes + Neutral (%)**	**Total No (count)**	**Total No (%)**	**Total Yes + Neutral - Total No**
Partner with organizations such as Habitat for Humanity and Boulder County Housing Authority to support the creation of affordable homeownership options.	98	32%	40	13%	138	45%	171	55%	-33
Subsidized or reduced fees for affordable housing projects.	74	24%	35	11%	109	35%	203	65%	-94
Explore the creation of a housing trust fund and other local revenue sources to fund a variety of affordable housing activities.	52	17%	49	16%	101	33%	205	67%	-104
Establish the fee-in-lieu amounts as intended in the Inclusionary Housing Ordinance	36	12%	61	20%	97	32%	208	68%	-111
2.2.3. Expedited review for affordable housing projects.	63	20%	35	11%	98	32%	210	68%	-112
Partner with affordable housing providers to redevelop vacant or underutilized land for affordable housing.	69	22%	29	9%	98	32%	212	68%	-114
Explore the creation of a commercial/residential linkage fee to provide financial support for affordable housing projects.	45	15%	49	16%	94	31%	211	69%	-117
Density bonus.	50	16%	35	11%	85	28%	224	72%	-139
Height bonus.	32	10%	38	12%	70	23%	241	77%	-171
Create a land donation, land acquisition, or land banking program. (Town owns 15 acres of land with no future designated use currently)	45	14%	26	8%	71	22%	246	78%	-175

3. Remove Housing Barriers for People Who Often Encounter Them									
Draft Action	**Total Yes (count)**	**Total Yes (%)**	**Total Neutral (count)**	**Total Neutral (%)**	**Total Yes + Neutral (count)**	**Total Yes + Neutral (%)**	**Total No (count)**	**Total No (%)**	**Total Yes + Neutral - Total No**
Create a centralized Town webpage that provides links to regional housing provider programs that serve Superior residents.	147	47%	69	22%	216	70%	94	30%	122
Support programs and organizations that assist older adults with their housing needs.	152	48%	56	18%	208	66%	106	34%	102
Promote weatherization assistance programs that help low-income residents with energy-saving repairs.	153	49%	48	15%	201	64%	113	36%	88
Explore programs and partnerships, such as the Boulder-Longmont Housing Rehabilitation Program, to support housing rehabilitation to help income and asset-qualified homeowners fix problems in their homes such as roofing, plumbing, heating, electrical, etc.	157	50%	43	14%	200	64%	114	36%	86
Explore incentive programs and partnerships that promote the creation of senior housing.	127	39%	73	22%	200	62%	125	38%	75
Incentivize or explore existing programs (Boulder-Longmont Accessibility Program) that makes a home more accessible for income and asset-qualified renters or homeowners with a disabled or elderly family member.	136	43%	55	18%	191	61%	123	39%	68
Remove language barriers in accessing housing resources and information by using technological solutions and/or partnering with culturally specific organizations.	121	39%	59	19%	180	58%	133	42%	47
Support and/or partner with mission-driven affordable housing providers, such as Trailhead Community to provide affordable housing for people with intellectual disabilities in the Town or region.	87	28%	88	29%	175	57%	133	43%	42
Advocate for and support existing regional and state tenant protection programs that serve to improve outcomes for renters such as: - Provide ample notice periods for rent increases; lease terminations; and the need to vacate due to renovations. - Prohibit discrimination based on source of income. - Require landlords to provide a summary of tenant's rights.	126	40%	51	16%	177	57%	136	43%	41
Form partnerships and work with culturally specific organizations to promote the availability of programs, incentives, and housing availability.	104	34%	68	22%	172	56%	135	44%	37

3. Remove Housing Barriers for People Who Often Encounter Them									
Explore land use policy changes to support the development of housing for seniors.	119	38%	56	18%	175	55%	142	45%	33
Support programs and organizations that assist IDD with their housing needs.	87	28%	78	25%	165	53%	144	47%	21
Evaluate the Town's Group Homes regulations to identify barriers to group home development.	71	23%	66	21%	137	44%	175	56%	-38
Modify or increase the three unrelated people occupancy cap to create greater housing choices for renters.	82	26%	45	14%	127	40%	192	60%	-65

From: Shape Superior <notifications@engagementhq.com>
Sent: Friday, June 21, 2024 4:05 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

I am glad to see an affordable housing plan in the works. However, there is no mention of any efforts for those experiencing homelessness (no PSH) and nothing about rent subsidies for those at 50% AMI and below. Bringing the affordable goals (12%) to the front of the plan would be nice.

From: Shape Superior <notifications@engagementhq.com>
Sent: Tuesday, June 18, 2024 8:37 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

Please create a streamlined document that describes what specific changes the Town of Superior might see if the tenets of this plan were adopted. As presented, it is not reasonable for an average citizen to read, digest, and understand how it would affect him/her.

From: Shape Superior <notifications@engagementhq.com>
Sent: Tuesday, June 18, 2024 12:50 AM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

Please provide data on total number of respondents per category to give a scope of popularity for the issues. For instance, I attended one of the sessions and perhaps only 20 people put sticky post-its on the wall. It would be good to make the broader community aware of the scale of individuals whom shared opinions. At the session at the community center, I was directed to vote for issues that I would be open to Superior researching further. This does not mean that I agree with the issue and wish to ensure that the survey results are properly represented.

From: Shape Superior <notifications@engagementhq.com>
Sent: Saturday, June 15, 2024 5:10 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

I was happy to see the IDD population mentioned. I want to reinforce 2 key points. Many in the IDD community need what Seniors need at a much earlier age. So when you look at your senior housing, which is highly emphasized in your plans,, please include the IDD population in your considerations. Many of the services overlap and there could be an opportunity to save money by having these 2 population share in the cost of services. It is very difficult to maintain service providers and by combining these 2 populations we can maximize our resources. Also just putting a roof over ones head does not provide many in the IDD population what they need on a daily basis. Remove barriers and build community supports into your developments. Consider co-housing, Consider clusters off homes for people with disabilities, then create a structure to support these people and the greater community can utilize. I am happy to chat more about these specific needs.

From: Shape Superior <notifications@engagementhq.com>
Sent: Saturday, June 15, 2024 3:05 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

First of all thank you for your work, I am proud to live in a city that is so willing to make improvements and listen to it's citizens. I would love for there to be more affordable options for housing in Superior, however there are a few things that I think are worth investigating further. First I think that adding apartments will not help housing affordability in Superior. I have lived in apartments in Superior for almost a decade, every year I am forced to submit to higher rent prices while the state of the units decline. A majority of these complexes are owned by 3 national corporations who have no interest in serving the great people of Superior. They base their rent prices on national averages and their bottom-line which can inflate the prices of other local housing options. Someone selling their home in Superior will look at high apartment rent prices in their area as an indicator that their home is more valuable than it actually is. This can add to a vicious cycle of price inflation for renters and home-owners alike. I strongly believe that the monopoly on apartments in Superior needs to be investigated. I believe that rent prices should be capped to prevent price gouging. I believe that the number of apartments should be capped to prevent real estate inflation. While these are the problems with apartments that I have noticed over the years, I also acknowledge that many people in our town have no other option than to rent which is why I believe we should invest in more rental houses, houses with an option to rent-to-own, and starter homes for young families. This would give lower income peoples and families more options to meet their needs. In my opinion, large number of homes built today still seem to forget the 2008 housing market crash ever happened, they're large 4+ bedroom houses that a majority of Superior residents don't need. Your report on the housing plan mentions that most Superior residents are young professionals so we should cater to them. In my experience, most of the people here that I've met are couples in their 20's-40's with 0-1 children so we don't need these large houses inflating an already impossibly expensive town. In the 1950's most houses that were being built were 1-2 bedroom starter homes and that allowed young people an affordable option to buy into the real estate market, while having a stable place to live for several years so they could work on finishing their education or starting their career. How are young people supposed to be successful when many are in a perpetual state of packing, moving and unpacking? If our town is to be successful for many years to come, we need to ensure future generations can be productive here too. I have seen some efforts for this like the "Wee Cottages" off McCaslin, however these start at 600k which is simply not affordable. I believe we should increase the percentage of small homes being built. I believe we should allow more rental houses to be built. I believe we should have more rent-to-own houses. I believe the success of young people should be a factor in these plans. Thank you again for your time and consideration, I hope my perspective was helpful.

From: Shape Superior <notifications@engagementhq.com>
Sent: Saturday, June 15, 2024 11:04 AM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

According to the data in this report, the only thing that is popular with the citizens of Superior is allowing more ADU's. The rest of this is garbage and opposite to the desires of most us. This entire process indicates a mindvirus that prevalent with local governments today, they will pursue these unfounded notions of "affordable housing" despite the desires of the people. Some of these ideas will actually reduce affordable housing, like 3.3.2 advocating "for and support existing regional and state tenant protection regulations that serve to improve outcomes for renters." If you improve outcomes for tenants, you necessarily harm outcomes for landlords. When the effort and expense is better invested in other markets, the property owners sell their rental properties (most likely to owner occupied, not renters). Those housing units have then been taken out of the rental, and more affordable, marketplace. It's basic economics but clearly Superior doesn't' have anyone with an understanding of economics.

From: Shape Superior <notifications@engagementhq.com>
Sent: Saturday, June 15, 2024 9:24 AM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

One of the major appeals of Superior is the feeling it gives, the sense of family and safety. Making housing more affordable is one thing, but actively engaging in methods to promote housing for those who could not afford to live in a place like Superior or Boulder will only bring discourse to the community. Objective 1: While increasing housing for senior residents is a great idea, removing housing restrictions will inevitably cause a shift in the feel of our great town. We do not want multifamily dwellings. Furthermore, "Missing Middle Housing" is defined as "diverse housing options, such as duplexes, fourplexes, cottage courts, and multiplexes." Again, we do not want such types of housing. Those who desire such housing have those options in adjacent towns. Objective 2: A lot of today's vocabulary uses "inclusive." While being inclusive is a positive thing, it does not need to be applied to every facet of life. Additionally, by reducing the price of land "for affordable housing," you will be lowering the value of surrounding areas and setting a dangerous precedent. Objective 3: Finally, there is a serious problem happening in Denver with the major influx of immigrants. However, it is in fact Denver's choice and Denver's dilemma, not ours. We do not want for the overflow from Denver to take over our small town. It would surely spell disaster for the tight-knit community. We do not agree with this plan.

From: Shape Superior <notifications@engagementhq.com>
Sent: Friday, June 14, 2024 4:58 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

Please abandon this proposed housing plan. The population of Boulder County is decreasing, home prices are dropping, and the government needs to stay out of housing issues. If you really care about the cost of housing why don't you do something to fight the county assessor's over valued property value assessments and the crazy expensive property taxes.

From: Shape Superior <notifications@engagementhq.com>
Sent: Friday, June 14, 2024 12:40 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

The strategic housing plan continually brings up missing middle housing options, however, within the very small footprint of the town, a massive apartment complex as well as a new downtown apartment building exist, a minimum of four separate townhouse/condominium developments exist, as well as two separate duplex communities. I argue that there is no missing middle housing options in the town of superior. I also do not believe that this plan represents anywhere close to the majority of opinions of town residents, as shown within the plan itself less than 10% of the town population offered any input. Superior town board would be far better served by striving to maintain town infrastructure at an exceptional level rather than frivolously spending money on unneeded social restructuring efforts.

From: Shape Superior <notifications@engagementhq.com>
Sent: Thursday, June 13, 2024 5:15 AM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

This plan seems to ignore that most people are satisfied with housing options in Superior. It's surprising that only 19% of people say we should build affordable housing and yet that seems to be the focus of this policy. This report appears to come with an agenda to create affordable housing where most people are not indicating that is an issue we should be solving for. Let's put our money to improving the quality of life for the residents who are here in this robust community. If there was an affordability issue, we would have houses sitting vacant and unsold. Instead houses sell immediately and this remains a desirable place to move. Please don't bring your agenda and then try to justify it with data that does not even support your theory that Superior residents want are prioritizing this issue.

From: Shape Superior <notifications@engagementhq.com>
Sent: Wednesday, June 12, 2024 9:49 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

This is a foodhardy endeavor that is fundementally flawed. A rule of life is that there are no "solutions", only trade-offs. Everything in life is a trade-off. There is no way to artificially (i.e. engineer against market forces) make housing more "affordable" without increasing property taxes, putting downward pressure on current home values, and increasing housing density and thus placing additional burdens on citizens in the form of traffic, congestion of amenities (pools, etc...), and undoubtedly more crime. Do not delude yourself for the sake of your ideologic utopian ideas. These are truths. These are the costs of your hubris. Leave this alone. You will only cause harm.

From: Shape Superior <notifications@engagementhq.com>
Sent: Wednesday, June 12, 2024 9:18 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

Great concern over the number of cars that can be the result of high density living. Even though we are close to the bus, there will be most likely be 1 car per adult resident. Superior doesn't have a very large opportunity for employment, so people will drive to their jobs, etc. elsewhere. It is naive to think they won't, and the sides of the roads will become like parking lots.

From: Shape Superior <notifications@engagementhq.com>
Sent: Wednesday, June 12, 2024 8:46 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

The town board should have thought about, and incorporated these ideas into the downtown Superior development, before thousands of expensive, poor quality, generic looking condos/townhomes were built. Any further development anywhere in Superior must go to a vote; residents must be allowed to vote on all future house actions.

From: Shape Superior <notifications@engagementhq.com>
Sent: Wednesday, June 12, 2024 8:22 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

I live at Bell Flartions

From: Shape Superior <notifications@engagementhq.com>
Sent: Wednesday, June 12, 2024 4:02 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

More housing will ruin what makes Superior great. We already have too many people and too much new housing.

From: Shape Superior <notifications@engagementhq.com>
Sent: Wednesday, June 12, 2024 3:40 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

"Affordable Housing" has turned out to be problematic in 100% of the cases nationwide, especially when government supported. It may be a "feel good" effort up front but over time causes tremendous problems for both the government entity and local residents. Superior has already made tremendous errors in providing an excess of rental units (apartments) which will also turn out to be problematic in the long term. Look at any "affordable" housing projects over 10 years old and the problems will be immediate apparent. Stop making decisions on emotions and use critical thinking with a long term vision.

From: Shape Superior <notifications@engagementhq.com>
Sent: Wednesday, June 12, 2024 3:17 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

Great job. However, I didn't see any mention of short term rental regulation. This is a huge miss. What is the point of building more ADU's if people are going to fill them with Airbnb guests. Original town is terrible right now. Those ADU's close to all the transit options and retail, are ideal for long term renters...yet it's been allowed to turn in to a hotel district.

From: Shape Superior <notifications@engagementhq.com>
Sent: Wednesday, June 12, 2024 3:17 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

Great job. However, I didn't see any mention of short term rental regulation. This is a huge miss. What is the point of building more ADU's if people are going to fill them with Airbnb guests. Original town is terrible right now. Those ADU's close to all the transit options and retail, are ideal for long term renters...yet it's been allowed to turn in to a hotel district.

From: Shape Superior <notifications@engagementhq.com>
Sent: Wednesday, June 12, 2024 2:52 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

This is a horrible plan made by morons with too much guilt. Basically all you're saying with this plan is, "we don't give a fuck if we hurt your property values by allowing affordable housing, we only care about getting re-elected". You act as if you actually diverted the town yet the survey results were an astounding "fuck no" and the only people that have time to show up to your open houses are jobless bums… this town was originally built as a wealthier town, and it should be a privilege to live here. All this does is show that you self righteous sacks of shit don't care about the people who sacrificed everything to raise their families in a town with no crime and a great education by showing them that their sacrifices mean nothing and in reality all you have to do to live a top 10 town in the country is be poor and cry about it enough.

From: Shape Superior <notifications@engagementhq.com>
Sent: Wednesday, June 12, 2024 2:04 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

I've lived here 30 years and thought we accomplished this through Wee Cottages and the townhomes in downtown. Why were 1.5 million dollar homes built in Superior to replace those destroyed in the fire? Couldn't this issue have been addressed then? It seems suspicious.

From: Shape Superior <notifications@engagementhq.com>
Sent: Wednesday, June 12, 2024 12:13 PM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

Dumb. Do NOT develop Section-B housing (or whatever it's called now) in this town. We do NOT want to look like Colfax, or "Portland", which you used as an example (Why?! Have you been to the war-torn city of Portland since summer of 2020?!). This town is exclusive, by design, and not EVERYONE can afford to live here. You want affordable living? Move to Brighton. Do NOT place housing of ANY sorts on Town-15 lot. For GOD'S SAKE! Please don't do that. It's already bad enough that this town created an "Apartment-vill" in what was supposed to be a vibrant and accessible place. Great job. Now we have 2000 extra people living next to Tesla that will never be part of the community because they are all Gen-Y and Gen-Z and Uber their dinner and never leave their apartments. Yay. This town has really crumbled since, oh, about November of 2014...

From: Shape Superior <notifications@engagementhq.com>
Sent: Monday, July 1, 2024 9:25 AM
To: Lisa Ritchie
Subject: Anonymous User completed Comment on Draft Strategic Housing Plan

Anonymous User just submitted the survey Comment on Draft Strategic Housing Plan with the responses below.

Share your comments here:

The Strategic Housing Plan seems very comprehensive and is well organized. I appreciate the level of detail provided, especially the assessment of current demographics and housing makeup of the Town. The Plan is also highly ambitious in terms of strategies. I understand that it is focused on ideas for the longer term but I worry that shorter-term market realities and limitations on the Town's ability to help contribute financially to many of the strategies will create significant headwinds to execution of the plan.

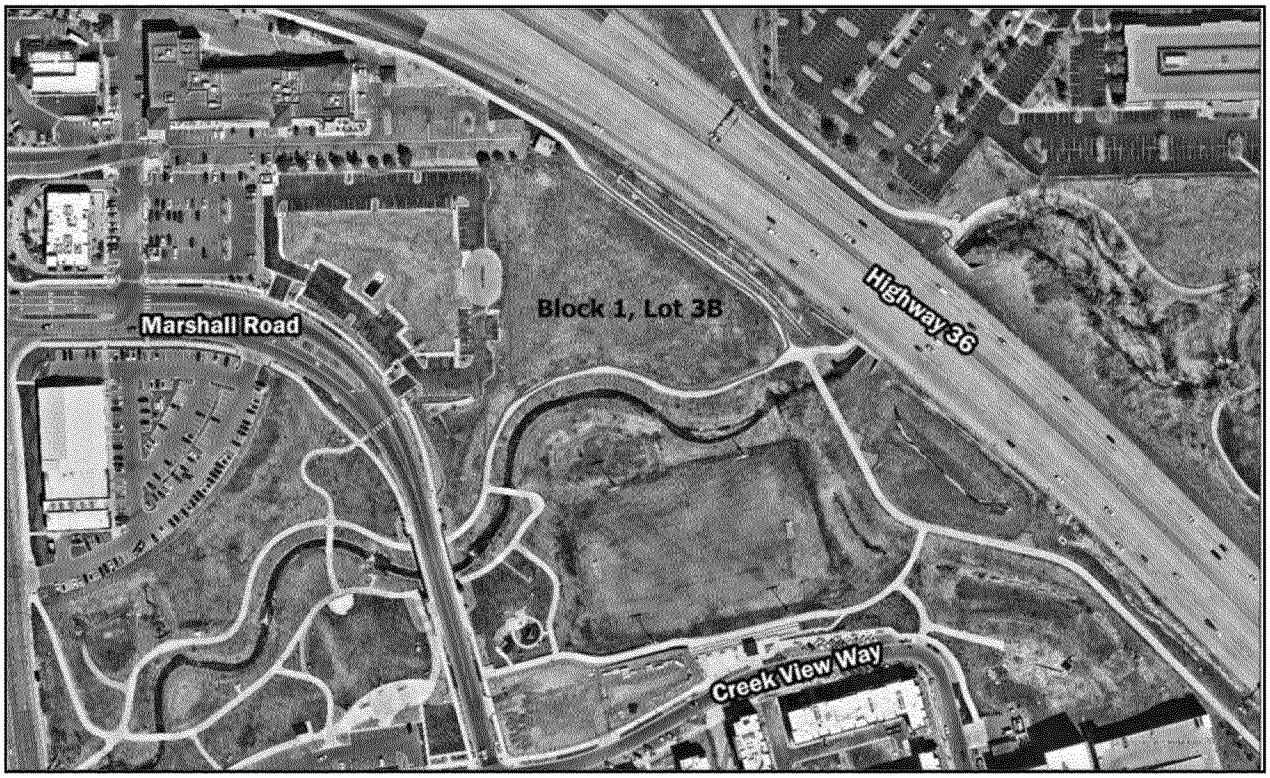
ITEM NO. 6

INFORMATION FOR MEETING
OF THE SUPERIOR BOARD OF TRUSTEES

AGENDA ITEM:	**Consideration of Final Development Plan (FDP) for Superior Town Center, Lot 3B of Block 1 (Case No. FDP-2024-03)**
MEETING DATE:	**July 8, 2024**
PRESENTED BY:	**Matt Magley, Town Manager** **Lisa Ritchie, Planning & Building Director** **Geoffrey Weathers, Planner I**
PRESENTED FOR:	**Action**

Item:	FDP, Block 1, Lot 3B – Case No. FDP-2024-03
Applicant:	Krysta M. Houtchens, Entitlement and Engineering Solutions, Inc., on behalf of Everhome Suites
Existing Zoning:	Planned Development – Downtown Superior (Superior Town Center)
Location:	Lot 3B, Block 1 within Downtown Superior (north of Creek View Way, east of Marshall Rd)
Request:	FDP proposes a four-story, roughly 60,000 square foot extended stay hotel with 114 guest rooms on a 1.97-acre lot, including a parking lot, landscaping, drainage and water quality infrastructure.

VICINITY MAP:



SUMMARY:

The Applicant, Entitlement and Engineering Solutions, Inc., requests approval of a Final Development Plan (FDP) for Block 1, Lot 3B of the Superior Town Center, located between Marshall Road and Highway 36, north of Creek View Way and Superior Commons Park.

FDP proposes a four-story, 57,972 square foot extended stay hotel with 114 guest rooms on a 1.97-acre lot. Additional improvements to the site would include a 114-space parking lot, an amenity space, landscaping, drainage and water quality infrastructure.

BACKGROUND:

The property is located within the Superior Town Center Planned Development (PD), originally approved in 2012. Subsequent amendments have been approved by the Town; however, this site has continued to be designated for a hotel use since the current configuration for Downtown was adopted with the first PD Amendment in 2013. The most significant change to the original conception for the lot came in 2016, when the Town approved a subdivision plat that divided the block into 2 lots, in conjunction with an FDP for the Element Hotel on the adjacent Lot 3A. This hotel was constructed and operational for a few years prior to being destroyed during Marshall Fire on December 30, 2021.

The site is located in the northern part of Downtown Superior and has exceptional proximity to Superior's multimodal transportation network, recreational resources, and retail destinations. The property abuts the Coal Creek and Highway 36 Trails along the full extent of its southern and

eastern frontages, providing local and regional recreational and mobility opportunities for walking and biking directly from the site. Coal Creek and Superior Commons Park border the site to the south, and the Mayhoffer-Singletree Trailhead to Boulder County Open Space is located only about a mile away. The site is a quarter mile walk to destinations such as Downtown Superior Main Street, Blue Sport Stable, the RTD Park and Ride, and Superior Marketplace, each of which can be accessed by bike or on foot without crossing a street.

This property is the only remaining lot within the PD to not have approval of a FDP.

PROPOSAL & FINAL DEVELOPMENT PLAN DETAILS:

The FDP for Everhome Suites proposes a single, four-story, 57,972 square foot hotel building on Lot 3B, Block 1 of Superior Town Center. This block is located a quarter mile north of Main Street, east of Marshall Road in Planning Area 1 of Superior Town Center. The plan proposes a 14,901 square foot building footprint with 51,575 square feet of the lot being impermeable surface and 19,428 square feet devoted to landscaping. The project includes a 114-stall parking lot, the vast majority of which is located on the east side of the building. An ADA compliant sidewalk provides pedestrian access to the site and buildings front, side and rear entrances from Marshall Road, the Lot 3A parking lot, and the US 36 Trail. The plans also include a 2,200 square foot partially covered, outdoor private amenity space with an artificial turf area, fire pits, grills, dining tables, lounge chairs, and string lighting.

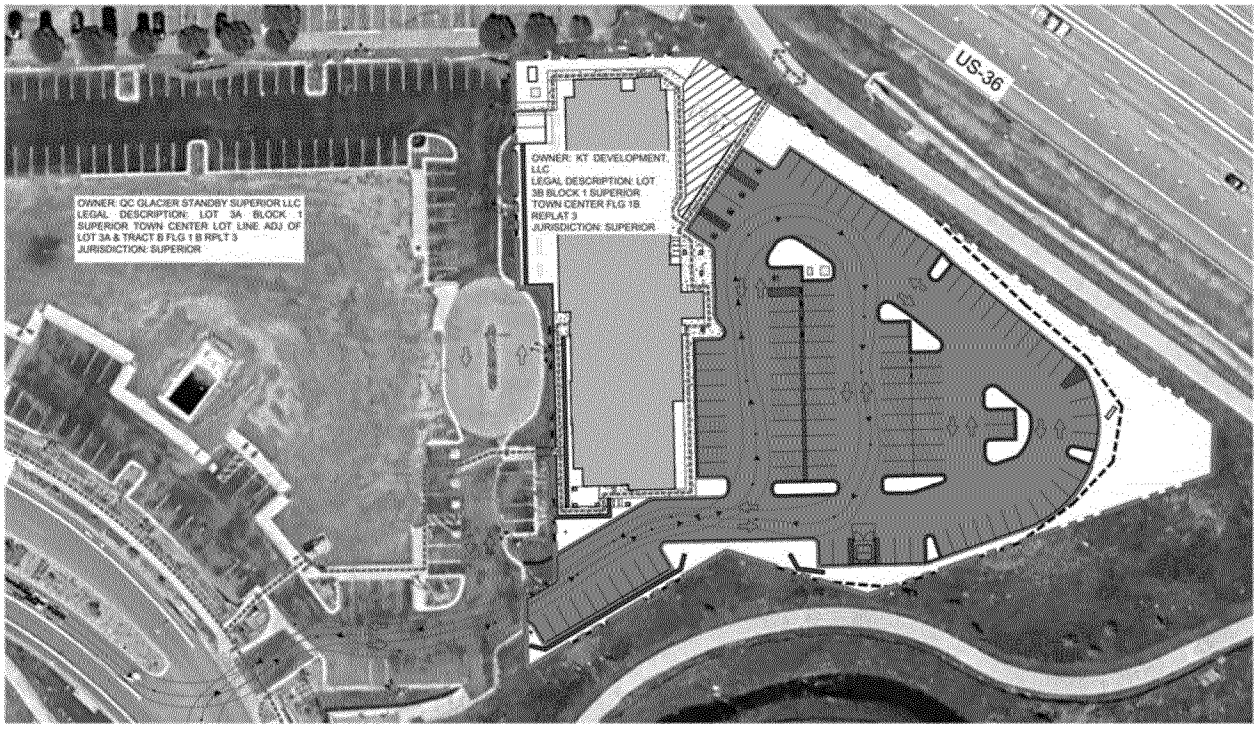


Figure 1 From Sheet P1.0 - Context Site Plan

Site Design, Setbacks, and Building Height

The application proposes a 57,972-hotel building on an 85,732 square foot (1.97 acres) lot. The rectangular building is 4-stories tall with equally dimensioned floors and total building coverage area of 14,901 square feet (.34 acres), taking up 17% of the lot area. Hard surface or paving comprises 60% of the remaining lot or 51,575 square feet (1.18 acres), while 23% or 19,428 square

feet (.45 acres) of the lot is landscaping. The Superior Town Center PD contains no lot coverage requirements.

The proposed building setbacks comply with requirements set out by the PD and do not encroach on any easements nor the 100-year floodplain area. The only setback requirement stipulated by the PD for this lot is a 10' minimum along the northern lot line. As proposed, the nearest horizontal distance from the north lot line to the building foundation is 12.8 feet. The proposed setbacks for the rest of the building are 46.2 feet on the south side, 314.3 feet on the east side, and 5.9 feet on the west side. The building's placement avoids conflict with both the sanitary sewer and trail easements that run along the eastern lot line as well as the floodplain boundary to the south. The orientation of the building also minimizes shading on the US 36 Bikeway just to the north of the site.

The PD allows for 3-6 story structures with a maximum height of 90 feet on this site. The proposal calls for a 4-story hotel with a maximum height of 56 feet, well below the maximum allowance. The proposed site design meets the PD requirements, and the application neither requires nor requests any exceptions for lot coverage, setbacks or building height.

Setbacks	**Minimum**	**Maximum**	**Proposed**
North	10'	None	12.8'
South	0' (Subject to Floodplain)	None	46.2'
East	0' (Subject to 20' Trail Easement)	None	314.3'
West	0'	None	5.9
Height	**Maximum**	**Stories**	
	90'	3-6	56' (4 story)

Parking

For a hotel use, the PD requires a single space per room key. The applicant proposes to provide 114 parking spaces, one for each room in the hotel. Citing the constraints of easements and the floodplain boundary, the applicant is requesting an exception to the Municipal Code Section 16-24-10(e)7, which stipulates that off-street parking stalls must be a minimum of 9 feet wide by 18 feet deep. The request is to reduce the width of 26 stalls (23% of the total 114 stalls) to 8.5 feet wide by 16 feet deep around the boundary of the parking lot on the southern and eastern sides of the site (see highlighted yellow area below). Additionally, the application proposes to reduce the depth of 27 9-foot-wide spaces to a depth of 16 feet (24% of the total 114 stalls) (see highlighted green area below). All of the spaces proposed for reduced size abut areas that can accommodate the overhang of a vehicle, and the proposal continues to meet minimum width requirements for adjacent drive aisles.

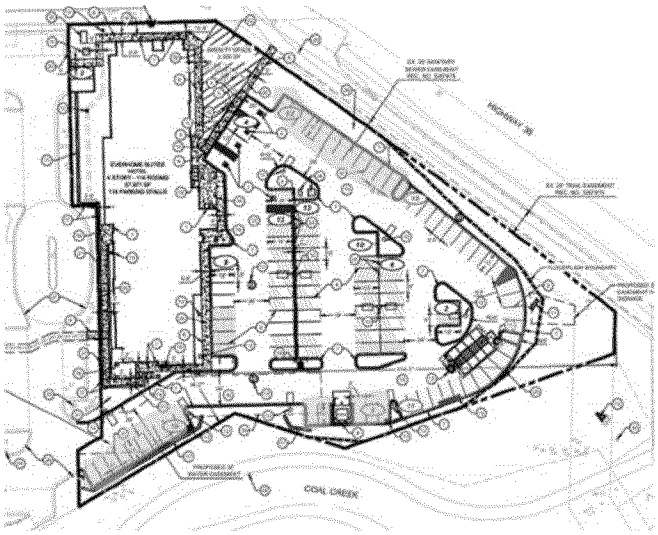


Figure 2 From FDP Sheet P1.1

The applicant is also requesting to provide a reduced number of Electric Vehicle (EV) capable parking stalls. Section CD103 of Section 18-9-20 of the Municipal Code requires parking lots for new commercial construction to provide a minimum 20% EV ready spaces, 20% EV capable spaces, and 10% EV installed spaces. An EV ready space is a parking space that is provided with one 40-amp, 208/2400-Volt dedicated branch circuit for EVSE that is terminated at a receptacle, junction box, or EVSE within the parking space; An EV capable space is a designated parking space that is provided with conduit sized for a 40-amp, 208/240-Volt dedicated branch circuit from a building electrical panel board to the parking space and with sufficient physical space in the same building electrical panel board to accommodate a 40-amp, dual-pole circuit breaker; and an EV installed space is a parking space with EVSE capable of supplying a 40-amp dedicated branch circuit rated at 208/240 Volt from a building electrical panel board.

The existing floodplain boundary and existing easement constraints in the parking lot prohibit EV infrastructure being installed in the perimeter stalls, therefore the applicant requests to provide only 1/3 of the required 24 EV capable stalls. As reflected in the table below, the applicant still meets the requirement for the EV installed and ready spaces:

	Required	Provided
EV Installed	12 (10% of 114 stalls)	12
EV Ready	24 (20% of 114 stalls)	24
EV Capable	24 (20% of 114 stalls)	8

Figure 3 From the Project Narrative

The PD also requires that bicycle parking should be provided in an amount equal to 10% of the required vehicular parking, with 1/3 of these provided in a covered environment. The proposal complies with the requirement, providing 12 total bike stalls, including 8 uncovered at the main building entrance and 4 covered at the south building entrance.

Traffic
A traffic study was submitted for the proposed hotel development. The study analysis projected 2043 peak hour level of service (LOS) for nearby intersections. The study demonstrates that future LOS near the site will be the same with or without the hotel development and concludes that the traffic generated by the hotel will not induce enough additional traffic to negatively impact traffic conditions at nearby intersections.

Pedestrian and Bicycle Access and Circulation
The Context Plan on Sheet P1.0 reflects ADA routes that provide pedestrian access to all the building entrances from Marshall Road to the south, Lot 3A to the west and US 36 Trail to the east. Because the access point from Marshall Road crosses private property not within right-of-way, staff is requiring the applicant enter into a joint access and maintenance agreement that ensures emergency, vehicular, pedestrian and ADA access is maintained. A condition of approval is included ensuring this is completed prior to recordation of the FDP>

Although the plans do not call out bicycle facilities specifically, bicycles can also access the site from the US 36 Trail as well as the painted bike lanes along Marshall Road.

Truck Fire Access
The Context Plan on Sheet P1.0 also reflects the fire truck access to and from the property and demonstrate the turning radius calculations based on average of inner and outer front wheel cramp angles for the Mountainview Viper (fire truck). The site plan reflects the ability of the truck to access each hydrant location and navigate the parking lots in the front and rear of the building. As noted above, because portions of the emergency access are on private property adjacent to this site, an agreement is required to ensure the access is properly maintained prior to, during and ongoing with any redevelopment of Lot 3A (the Element Hotel site).

Utilities
Block 1 is served by public utilities, some of which are already installed. The Utility Plan on Sheet P3.0 reflects the existing water, sanitary sewer and electric lines in grey, while proposed improvements are reflected in black. Water lines connect to the site via the adjacent lot on the west side of the building, and sewer lines run through the parking lot area on the east side of the lot, connecting to existing services located in the existing utility easement adjacent to the US 36 Trail. Electric services connect to a proposed transformer at the northwest corner of the building.

Drainage & Grading
A Final Drainage Report was submitted with the application. The report confirms that the proposed Finished Floor Elevation of 5475.50 is well above the base floodplain elevation in this location. According the report, the proposed improvements will increase site imperviousness to 79.0% from the current native state of 0.0%. The report finds that peak stormwater runoff will have no impact on the peak flows from the Coal Creek watershed because the runoff from the site will have passed prior to the peak flow of the larger watershed. The report agrees with the Town's assessment that additional detention is not required at this location but finds that the development must comply with water quality requirements in accordance with the Town's MS4 permit. The report details the proposed treated outfall to the major drainageway of Coal Creek: "The proposed water quality treatment system is required to have a water quality capture volume of 2,309 CF. To achieve this volume, a proposed ADS Stormtech chamber system with a surface area of 727 SF will be utilized.

The water quality pond will utilize an outlet structure with three (3), one-half-inch (1/2") orifices. Water Quality within the ADS system will be handled by the isolation row within the ADS system. The ADS system also includes a 2' sump at the manhole where flow enters the system. There are currently three different third-party tests for this product, all showing a minimum of 80% TSS removal…"

Sheets P2.0-P3.0 demonstrate the proposed grading and drainage for the site. The plans indicate that runoff flows to, and collects in, one of six inlets on the site, which empty into the proposed ADS stormwater treatment system. Along the western portion of the southern lot line, two 1.5 foot retaining walls curb runoff toward the nearest inlets. Once treated by the ADS system, the stormwater is release into Coal Creek.

The proposed grading for the site slopes east and slightly south to conduct water toward the planned ADS stormwater treatment system. Due to the grade change on the lot, the building will sit below the current grade of the adjacent lot to the west. On the west side of the building, a retaining wall rises 4 feet from finished grade of the subject lot up to the existing grade of the Element lot to account for the lot slope.

Landscaping and Irrigation

Landscape and irrigation plans are on Sheets L1-L9. The landscape plans reflect the types and location of vegetation and ground covers on the site as well as that of the decorative and recreational features found in the amenity area, such as string lighting, fire pits and grills. The plans also include plant specifications, overall landscape requirements, planning notes, soil specifications, and detail sheets.

Section 4.6D of the Design Guidelines calls for one 2 ½" caliper shade tree and five shrubs are to be provided for every 8 parking spaces in the parking lot. The plans demonstrate compliance with 14 trees and 71 shrubs being provided for the 114-space lot.

Site Lighting

The lighting and photometric plans are found on Sheets PH.1-PH.3. The photometric plan reflects the placement of lighting fixtures on the site and demonstrates external lighting coverage over areas with pedestrian walkways, parking lots and outdoor amenity areas. According to the plan, lighting within the lot does not cross the property lines. The Lighting Fixture Schedule provides details about the lighting fixtures, including their manufacturers, lumens, and description. Further information of each fixture is also provided on supplemental pages and are assigned labels.

Architecture and Design

The architecture and design requirements for the site are stipulated by the Design Guidelines. The purpose and intent of the Design Guidelines is "to establish and maintain a high-quality community appearance, assure consistency, direct character and form, encourage sustainable development, and enhance the overall value of Superior Town Center." The Design Guidelines also provide specific criteria to contribute to an overall sense of community" (Section 1-1). Sections 7-8 lays out the guidelines specifically related to hospitality uses, notably:

- The overall hotel layout shall relate to and enhance the north entry to the Town Center.

- The overall layout and design of the hotel shall enrich its relationship to the Coal Creek corridor.
- The strategic location, program and characteristics of the proposed hotel offer an excellent opportunity to create an iconic imagery/landmark along US 36. All sides of the block will be articulated with modulated facades that reduce the scale and mass of the building.
- For visual interest, and to reduce a monolithic appearance, the mass of the building will be broken down, horizontally and vertically, into a hierarchy of volumes.
- Further articulation will be considered at the ground floor (podium).
- The design of the roof form and other related elements such as roof material, color, and trim should be an integral part of the architecture to enhance the overall Town Center roof character.
- The roof forms at the lower floor (podium and porte cochere) should be highly articulated, crafted in appearance and built from regional palette of materials. The roof forms at the top floors should provide a distinct pitched form with minimal flat roof forms.
- Primary vehicular entry (hotel porte cochere) shall be easily and directly accessible from Marshall Road and/or adjacent drive aisle (conference porte cochere, if programmed).
- Unique building massing, special architectural features and articulation will be incorporated in roof lines to emphasize building entrances (vehicular and pedestrian).
- The site design for the hotel should feel integrated within the natural, recreational and resort character of Planning Area One and include a landscaped area oriented towards the Coal Creek Open Space.
- The hotel should offer attractive and inviting pedestrian scale features, spaces and amenities such as: 1) patio/seating areas, 2) landscaped gardens, 3) other amenities.
- Required overnight parking shall be located along the west and east portions of the parcel (screened from public view along the Coal Creek corridor. Short-term / drop-off parking along the Marshall Road frontages shall be landscaped and efforts made to maintain a pedestrian priority environment.

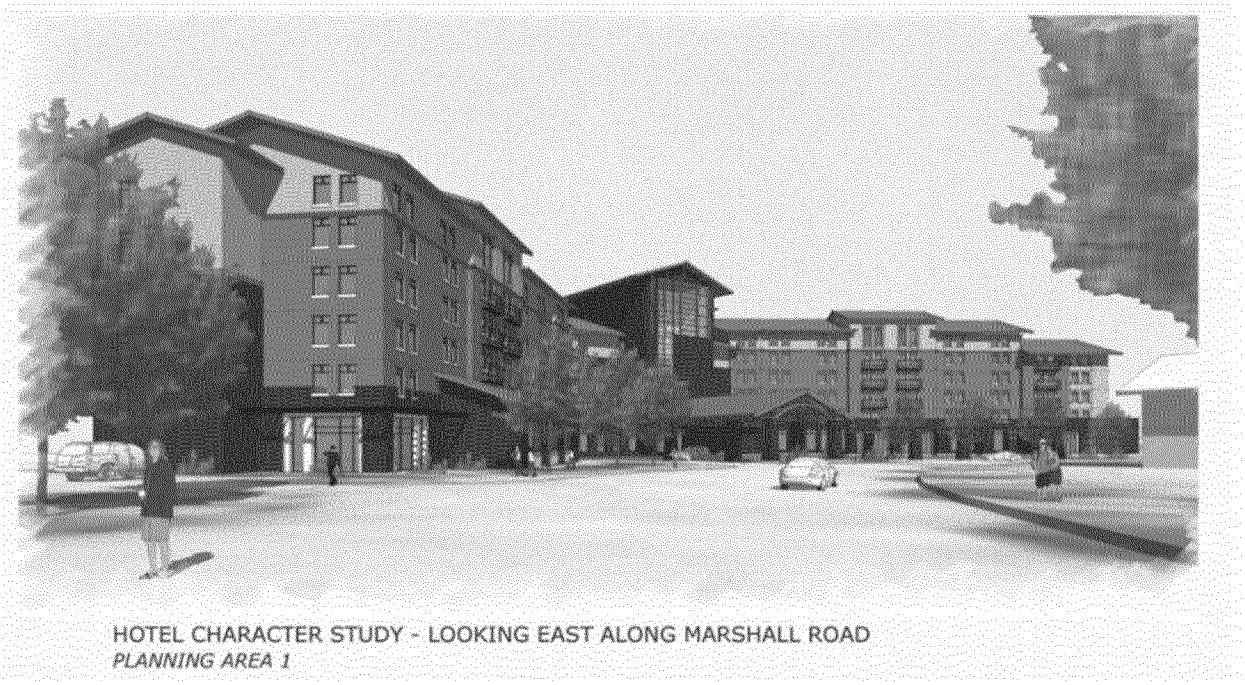


Figure 4 From Planned Development Amendment #1

To satisfy these requirements, the applicant proposes a rectangular building with modest articulation and 4th story awnings, situated on the northwest corner of the lot, facing east toward Highway 36. Sloped roof forms accent the north, west and east elevations. The building materials include white, gray, and blue stucco; "spruce" fiber cement; Grand Banks Limestone masonry and a Lead-Cote metal on the sloped roof features. The rear of the building sits approximately 4 feet below the grade of Marshall Road, hiding a portion of building from view. In part, the placement of the building was chosen so as not to cast a shadow over the US 36 trail or Coal Creek corridor. In the northwest corner, a pedestrian walkway connects the site to the Highway 36 trail. The plans also call for wall murals on the east and south building elevations as well as an amenity area with an artificial turf area, fire pits, grills, dining tables, lounge chairs, and string lighting.



Figure 5, Rendering of East Elevation of Proposed Hotel

Analysis of Final Development Plans
The Superior Municipal Code includes the following criteria for consideration of approval of FDPs:

Sec. 16-10-40 (b) Criteria:

1. *Prior to approving an FDP, the Planning Commission and the Board of Trustees shall find that the FDP is consistent with the PD Plan and all other Town ordinances and regulations.*
2. *The Planning Commission and Board of Trustees, however, may approve an FDP which has been modified to reflect improvements in design or changes which have occurred in its natural surroundings and environment since the time of the PD plan review and approval.*
3. *An FDP may be submitted in sections covering representative and reasonable portions of the subdivision tract. In such cases, submission shall include a map indicating the sections designated for the entire tract, and each sheet numbered accordingly, including title, legend, matchlines and other appropriate information. When an entire parcel is not subdivided, the applicant shall indicate his or her intended plans for disposition of the remainder of the parcel.*
4. *When ambiguity exists in the application of a PD plan to an FDP, or when a PD plan does not address a development standard, the applicable development standard of this Chapter shall apply to the FDP.*

Staff acknowledges that the Design Guidelines contemplated a higher end hotel that may include conference or meeting space on Block 1. As noted above, the Town approved a replat of Block 1 and an FDP for the Element Hotel on the adjacent lot that results in legitimate challenges realizing that outcome at this point. Additionally, the hotel market is responding to the performance of the former Element Hotel with this application. Staff finds that, in spite of these circumstances, there is no physical constraint that prevents additional articulation and architectural enhancements, particularly at the ground floor level. Staff recommends careful consideration by the Town Board of compliance with the Design Guidelines as they relate to the proposed architecture of the hotel.

Staff finds the FDP to be generally consistent with the Superior Town Center PD as well as all other Town ordinances and regulations should the exceptions be accepted, and conditions and technical corrections be addressed. The following exceptions are being requested by the applicant:

1) Reduced parking dimensions: Section 16-24-10(e)7 of the Municipal Code requires off-street parking stalls to be 9' wide by 18' depth. The exception request is to reduce 26 stalls (23% of the total 114 stalls) to 8.5'wide x 16' depth. Additionally, the application proposes to reduce the depth of 27 spaces to 16 feet (24% of the total 114 stalls). The narrower stalls are proposed at the outer boundary of the parking lot on the southern and eastern sides of the site due to floodplain and easement constraints.
2) EV Capable Parking Reduction: Section CD103 of Section 18-9-20 of the Municipal Code requires parking lots for new commercial construction to provide a minimum 20% EV capable spaces. Due to floodplain boundary and easement constraints on parking configuration which prohibit EV infrastructure being installed for the perimeter stalls, the applicant requests to provide only 8 of the required 24 EV capable stalls.

PLANNING COMMISSION RECOMMENDATION:
On July 2, 2024, a Public Hearing was held by the Planning Commission to consider an FDP for an Everhome suites extended stay hotel on Lot 3B, Block 1 of the Superior Town Center (Case No. FDP-2024-03). During the meeting, the Commissioners received presentations from Town staff and the applicant and also invited comments from the public. No public comments were offered at the Hearing. The Commissioners had questions and comments for staff and the applicant regarding:

1. Whether Public Works had reviewed and approved the water consumption and connections for the project.
2. Whether the applicant had considered solar panels for the project.
3. Whether the applicant had considered labeling reduced-size parking spaces as "compact."
4. Whether non-EV automobiles are allowed to park in EV spaces, and whether this might constrain parking supply.
5. Whether any signage was permitted with the application.
6. Whether the artificial turf in the amenity area is intended to be used by pets.

The Planning Commission voted 6-0 to recommend approval of FDP without conditions

FISCAL IMPACT ESTIMATES:
- One-time revenues $773,000 (inclusive of utility system development fees, but without Building permit or use taxes)
- Annual revenues $110,000 (not including utility fees)

STAFF RECOMMENDATION:
If the Board of Trustees finds the application meets the applicable criteria, staff has provided a Resolution approving the Everhome Suites Final Development Plan for Block 1, Lot 3B of the Superior Town Center Planned Development, with the following conditions:

A. Prior to the recordation of final mylars, the Applicants shall make minor technical and redline corrections to plans as identified by Town staff and directed by the Town Board.
B. Prior to recordation of this FDP, the applicant shall submit to the Town a maintenance and access agreement between Lot 3A and the subject property to ensure that bicycle, pedestrian, vehicular, emergency and ADA access is maintained in good condition at all times. The agreement shall be in a form acceptable to the Town and Mountain View Fire District.
C. South facing signage shall not be illuminated between 10pm and 6am.

ATTACHMENTS:
- Resolution
- FDP Project Narrative
- FDP Plan Sheets
- Drainage Report
- Water Demand Utility Report

- Traffic Impact Study
- Environmental Report
- Economic Impact Statement
- Applicant Presentation
- PC Resolution

TOWN OF SUPERIOR
RESOLUTION NO. R-38
SERIES 2024

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR APPROVING A FINAL DEVELOPMENT PLAN FOR LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER, CASE NO. FDP-2024-03

WHEREAS, Entitlement and Engineering Solutions, Inc., on behalf of Everhome Suites (the "Applicant"), wishes to develop the real property legally described in **Exhibit A**, attached hereto and incorporated herein by this reference, and generally described as Lot 3B, Block 1 within Superior Town Center (the "Property");

WHEREAS, the Applicant has filed an application for approval of a final development plan (the "FDP") to construct a hotel with a surface parking lot and private amenity area (the "Application");

WHEREAS, Section 16-10-40 of the Superior Municipal Code (the "Code") requires a public hearing and recommendation by the Planning Commission on the FDP;

WHEREAS, the specific approval criteria for the FDP are set forth in Section 16-10-40(b) of the Code;

WHEREAS, on July 2, 2024, the Planning Commission held a properly-noticed public hearing on the Application and recommended approval with conditions;

WHEREAS, on July 8, 2024, the Board of Trustees held a properly-noticed public hearing on the Application; and

WHEREAS, the Board of Trustees, upon reviewing the recommendation of the Planning Commission, hearing the statements of staff and the public, and giving due consideration to the matter, finds and determines as provided herein.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. The Board of Trustees hereby finds that the FDP, subject to the conditions set forth in Section 2 hereof, meets all of the criteria set forth in the Code and is consistent with the Town of Superior Comprehensive Plan.

Section 2. The Board of Trustees hereby approves the FDP, subject to the following conditions:

A. Applicant shall make minor technical and redline corrections to plans as identified by Town staff;

B. Prior to recordation of the FDP, Applicant shall submit to the Town an executed maintenance and access agreement between Lot 3A and the Property to ensure that bicycle, pedestrian, vehicular, and emergency access, in full compliance with the Americans with Disabilities Act, 42 U.S.C. § 12101, *et seq.*, is maintained in good condition at all times. The agreement shall be in a form acceptable to the Town and Mountain View Fire District; and

C. South facing signage shall not be illuminated between 10:00 p.m. and 6:00 a.m.

ADOPTED this 8th day of July, 2024.

_____
Mark Lacis, Mayor

ATTEST:

_____
Lydia Yecke, Town Clerk

EXHIBIT A
Legal Description

LOT 3B, BLOCK 1 SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3, TOWN OF SUPERIOR, COUNTY OF BOULDER, STATE OF COLORADO

K2 CIVIL CONSULTANTS

3801 E. Florida Avenue
Suite 425
Denver, CO 80210

July 3, 2024

Town of Superior
Town Hall
124 E. Coal Creek Drive
Superior, Colorado 80027

RE: Everhome Suites – Superior – Project Narrative

K2 Civil Consultants Inc. is pleased to submit the Final Development Plan package of the proposed Everhome Suites development at 3 S. Marshall Street. The proposed 1.97 acre development is a four-story 59,971 GSF extended stay hotel with 114 guest rooms. There will be additional improvements to the site aside from the hotel, including a parking lot, landscaping, and drainage and water quality infrastructure. This submittal package follows the FDP application checklist provided by the Town of Superior and addresses the review criteria where applicable.

The proposed development site is currently vacant and is bordered by the Element Hotel to the west, the Coal Creek Trail to the south and the northeast, and US-36 to the northeast. There is no direct proposed access to Marshall Road. Access to the site is through a single access point to the shared private drive on the Element Hotel site. There is an existing access and utility easement in place that will be utilized.

The project will utilize an existing regional detention pond but will have water quality infrastructure installed on site. Existing sanitary and water mains will be utilized for this project, there are no mainline extensions anticipated.

There is an existing reciprocal easement agreement (Rec. #03572997) for shared parking and access through the adjacent Element Hotel site is currently being modified as needed for this development. This easement includes utility and emergency vehicle access as well. KT Development is currently working with neighboring property on agreements and can be provided to Town as reference once completed.

Since this lot relies on access through the Element Hotel site, a pedestrian access and maintenance easement will be established for the ADA route that will connect our site to Marshall Road. This will ensure that the ADA path is properly and safely maintained until that site is redeveloped. KT Development is currently working with neighboring property on agreements and can be provided to Town as reference once completed. The extents of this easement is provided on FDP for reference.

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Description of Everhome Suites

The Everhome Suites brand is built to suit the exact need of today's extended-stay guest providing them with precisely what they need to own their routine and stay just as they do at home. Most of the guest will be traveling on business, often on long-term work assignments or relocating, while a smaller subset of guests will be traveling on extended vacations, typically with, or to visit, family. By understanding the practical needs of these types of travelers, Everhome Suites is able to provide inviting and functional amenities and services. They provide spacious one bedroom and studio suite layouts that feature defined spaces that separate work from play, kitchens with everything guests need to prepare a meal, modern and sophisticated lobby area, spacious fitness centers with cardio and strength training equipment, guest laundry facilities and 24/7 self-service tech-enabled marketplaces with a variety of hot and cold food and beverage options. Everhome Suites also offer an outdoor amenity area with seating, turf area for yard games and fire pits.

This Everhome Suites belongs in this area and will benefit and serve patrons of neighboring business such as the Sports Stable for any extended sporting events, commercial restaurant as this will be walking distance to many for hotel guest and nearby businesses that require long term business travel.

Hours of Operation & Number of Employees

Everhome Suites will operate 24-hours a day to allows patrons to check-in at all hours as needed. There are typically 2-5 employees onsite at any given time. With this being an extended-stay hotel, there are not as regular of guest turnover requiring additional clean staff for room cleaning.

Snow Removal

Snow will be removed from the parking and sidewalk areas and placed in the landscape islands or in the landscape area at the eastern side of the site outside of the parking lot.

Timeline and Phasing of Project

The intended timeline of the this project is to start construction of the site in the third quarter of this year (2024). Typical construction of a Everhome Suite project is 12-13 months, therefore intended opening date would be third/fourth quarter of 2025. This project will be completed at one time and there is no anticipated phases.

Compliance with Superior Town Center Design Guidelines

The project site falls within the Superior Town Center. As such this development has been design with the Superior Town Center Design Guidelines as the standards. Below is a list of the Development and Design Principals and how they are being met:

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- Connectivity – The project site is connecting to the existing Marshall Road through an existing access easement on the neighboring property to the west of the site. The development is providing both vehicular and pedestrian connectivity to Marshall Road. Coal Creek Trail runs adjacent to the site on the east and south of the site and the hotel development is provide trail connection to the east of the site.
- Mix of Uses – the hotel use provides variety to the mix of commercial, retail and housing development in the area. The extended stay component of the hotel also adds some diversity to the area.
- Place Making – The site layout and design allows for walkable urban town center, connection to natures trails and maintains the functionality of the Coal Creek Trail by placing the building away from the trail to not cast a shadow over it.
- Sustainability – This development is providing EV installed and EV Ready stalls.
- Memorable – The building has been designed with uniques features that meet the design criteria as required.

Exception Requests

There are two proposed exception requests as part of this proposed development as outlined below.

Exception Request #1 – Reduced Parking Dimension:

As part of this project, we are requesting an exception request to the standard parking stall dimension. Town of Superior code requires parking stalls dimensions at 90 degrees to be 9' wide by 18' depth. The exception request is to reduce 26 stalls (23% of the total 114 stalls) to 8.5' wide x 16' depth and 27 stalls (24% of the total 114 stalls) to 9' wide x 16' depth. The reduced sized parking stalls are proposed at the outer boundary of the parking lot on the northeastern, southern and eastern sides of the site. The proposed 8.5' width reduction will not have an impact on a vehicles ability to park as the average mid-sized vehicle has a 6' width leaving 2.5' additional room for vehicle doors to open and maneuver. Per Town of Superior Code Section 16-24-60 (d), it states that the perimeter parking length can be shortened to allow from the front of the vehicle to overhang in the landscape area. The code does not state the allowed amount of the reductions, however we researched the codes of neighboring communities and found that a 2' reduction was acceptable in many of those jurisdictions.

This exception should be granted as there is no negative impact on the functionality of the site while being able to fit the Town desired use with the site hardship of the existing easements and Floodplain surrounding the site.

Exception Request #2 – EV Capable Parking Reduction:

We are requesting an exception to the EV parking and charging requirements due to several hardships imposed by the site. Per Chapter 18, Article IX, Section 18-9-20 Amendments Section CD103 of the Town of Superior Municipal Code, this development is required to provide EV

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Suite 425
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installed, EV Ready and EV Capable stalls based on the total 114 stalls provided. See the table below for a summary of the required and provided EV parking stalls:

	Required	**Provided**
EV Installed	12 (10% of 114 stalls)	12
EV Ready	24 (20% of 114 stalls)	24
EV Capable	24 (20% of 114 stalls)	8

As outlined in the table above, this development is meeting the EV Installed and EV Ready required stall requirement. This exception is to reduce the required EV Capable requirement of 24 stalls to 8 stalls (reduction of 16 stalls).

This exception request should be granted due to site constraints making it unfeasible to meet the requirement. The constraints of the site including the 100-year flood plain boundary and the utility easements running through the site have constricted our parking stall configuration which prohibits the EV infrastructure from being installed at any of the perimeter parking stalls. In addition there is a Tesla Supercharger site at the corner of McCaslin and Marshall with multiple charging stations that can be utilities as well.

FDP Plan Sheet Descriptions

The sheets included in this submittal are the following:

Sheet #	**Sheet Title**	**Description**
P0.0	COVER SHEET	Project title, legal description, vicinity map, signature blocks, sheet index, applicant and development team information, site data table, basis of bearing, and project benchmark.
P1.0	CONTEXT SITE PLAN	Provides neighborhood context, pedestrian, bicycle, and vehicular connections with the surrounding area and onsite circulation
P1.1	SITE PLAN	Dimensional layout, parking and striping plan, development standards table, parking stall summary
P2.0	DRAINAGE PLAN	Water quality system, stormwater layout, basin information, surface contours
P2.1	GRADING PLAN	Topo surface contours, spot elevations
P3.0	UTILITY PLAN	Water, hydrants, sewer, stormwater, gas, and electric layouts
A2.0	BUILDING ELEVATIONS	South and West building elevations. Trash Enclosure elevation and details

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A2.1	BUILDING ELEVATIONS	East and North building elevations. Amenity Area structure detailed elevations
A2.2	PERSPECTIVES	3-D perspective renderings of the proposed building
A2.3	MATERIALS BOARD	Building Material descriptions and images
PH.1	SITE PHOTOMETRIC PLAN	Photometric study, lighting fixture schedule, pole mounted fixtures installation detail
PH.2	SITE LIGHTING FIXTURES	"L", "FA" and "FB" fixture details
PH.3	SITE LIGHTING FIXTURES	"SA3-HSS", "SA23", and "SA5" fixture details
L1	LANDSCAPE PLAN	Planting and seeding plan and legend
L2	AMENITY AREA ENLARGEMENT	Amenity area enlarged view
L3	LANDSCAPE SCHEDULE & NOTES	Plant schedule, landscape requirement tables, landscape notes
L4	LANDSCAPE DETAILS	Details for shrub/ornamental grass planting with mulch ring, steel edging, shrub planting, deciduous tree planting, and evergeen tree planting
L5	SITE DETAILS	Amenity Area Site Details
L6	IRRIGATION PLAN	Irrigation point of connection, wall mount controller and irrigation system layout
L7	IRRIGATION SCHEDULE & NOTES	Irrigation notes and schedule
L8	IRRIGATION DETAILS	Irrigation fixture details
L9	IRRIGATION DETAILS	Irrigation fixture details

K2 Civil Consultants Inc. has performed thorough research of the existing information on the property, solicited a survey, and coordinated with the City and other jurisdictions to compile and complete the finalized project design.

Should you have any questions, please do not hesitate to contact us.

Respectfully Submitted,
K2 Civil Consultants Inc.

Krysta Houtchens

Krysta M. Houtchens, P.E.
Associate/Sector Lead

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BASIS OF BEARING

BEARINGS ARE BASED UPON THE NORTHEASTERLY LINE OF LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, SAID LINE BEING AN ARC WITH A RECORD CHORD BEARING OF NORTH 54°18'05" WEST AS SHOWN ON SAID PLAT. THE MONUMENTS ARE DESCRIBED HEREON.

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

LEGAL DESCRIPTION

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO

EXCEPTION REQUESTS

1. REDUCTION OF STANDARD PARKING STALL DIMENSION OF 26 STALLS (23% OF TOTAL 114 STALLS) TO 8.5' WIDE BY 16' DEEP AND 27 STALLS (24% OF TOTAL 114 STALLS) TO 9' WIDE BY 16' DEEP AT PERIMETER PARKING.*
2. REDUCTION OF PROVIDED EV CAPABLE PARKING STALLS DUE TO UTILITY AND EASEMENT CONFLICT. REDUCTION REQUESTED TO REDUCE THE REQUESTED 23 EV CAPABLE STALLS TO 10 EV CAPABLE STALLS PROVIDED.

*TOWN OF SUPERIOR CODE SECTION 16-24-60(d) STATES THAT PERIMETER PARKING LENGTHS CAN BE SHORTENED TO ALLOW FOR THE FRONT OF VEHICLES TO OVERHANG IN THE LANDSCAPE AREA.

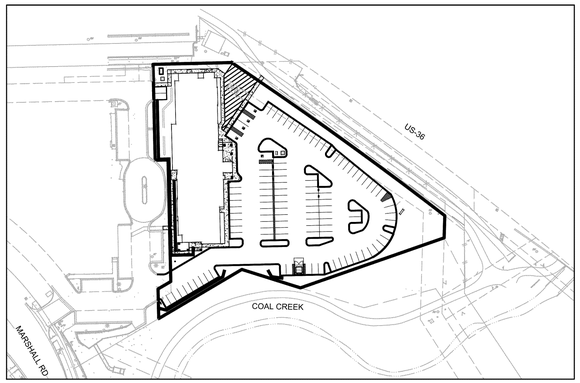
TOWN OF SUPERIOR SIGNAGE REQUIREMENTS

1. THE SIZE OF WALL SIGNAGE FOR HOTELS SHALL BE ALLOCATED ACCORDING TO THE BUILDING FRONTAGE TO WHICH THE SIGN IS ATTACHED (AS OPPOSED TO LOT OR STREET FRONTAGE)
2. SIGNAGE AREA SHALL BE CALCULATED ACCORDING TO THE TOWN CODE 16-19-90(b).
3. MAXIMUM SIGN SURFACE AREA: 1 SQUARE FOOT OF SIGNAGE PER LINEAR FOOT OF BUILDING FRONTAGE, UP TO 200 SQUARE FEET.
4. MAXIMUM ONE SIGN PER FACADE.
5. MAXIMUM AGGREGATE SIGN SURFACE AREA: 600 SQUARE FEET.
6. ALL OTHER SIGN REGULATIONS SPECIFIED IN THE SUPERIOR TOWN CENTER DESIGN GUIDELINES SHALL APPLY.
7. WHERE THE DESIGN GUIDELINES ARE SILENT, THE SUPERIOR TOWN CODE SHALL GOVERN.

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



SITE MAP
1"= 100'



VICINITY MAP
SCALE: 1"=650'

SITE DATA TABLE	
GENERAL ZONE LOT INFORMATION	
ZONING	PD
TOTAL SITE SIZE	85,732 SF (1.97 ACRES)
LEGAL DESCRIPTION	LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO
PROPOSED USE	HOTEL
BUILDING DATA	
BUILDING HEIGHT, STORIES	4 STORIES
BUILDING HEIGHT, FEET	56 FT
FIRST FLOOR AREA (SF)	14,493 SF
SECOND FLOOR AREA (SF)	14,493 SF
THIRD FLOOR AREA (SF)	14,493 SF
FOURTH FLOOR AREA (SF)	14,493 SF
SITE DATA	
BUILDING COVERAGE AREA, SF (ACRES)	14,901 SF (0.34 ACRES)
HARD SURFACE/PAVING AREA, SF (ACRES)	51,575 SF (1.18 ACRES)
LANDSCAPING AREA, SF (ACRES)	19,428 SF (0.45 ACRES)
OWNERSHIP	
BLOCK 1, LOT 3B	RC SUPERIOR LLC (PRIVATE)

SHEET INDEX

P0.0	COVER SHEET
P1.0	CONTEXT SITE PLAN
P1.1	SITE PLAN
P2.0	DRAINAGE PLAN
P2.1	GRADING PLAN
P3.0	UTILITY PLAN
A2.0	BUILDING ELEVATIONS
A2.1	BUILDING ELEVATIONS
A2.2	PERSPECTIVES
A2.3	MATERIALS BOARD
PH.1	SITE PHOTOMETRIC PLAN
PH.2	SITE LIGHTING FIXTURES
PH.3	SITE LIGHTING FIXTURES
L1	LANDSCAPE PLAN
L2	AMENITY AREA ENLARGEMENT
L3	LANDSCAPE SCHEDULE & NOTES
L4	LANDSCAPE DETAILS
L5	SITE DETAILS
L6	IRRIGATION PLAN
L7	IRRIGATION SCHEDULE & NOTES
L8	IRRIGATION DETAILS
L9	IRRIGATION DETAILS

CERTIFICATE OF OWNERSHIP

I CERTIFY THAT I,_____, AM THE SOLE OWNER OF THE PROPERTY AND CONSENT TO THIS PLAN.

IN WITNESS WHEREOF I HEREUNTO SET MY HAND THIS ___ DAY OF _____, 20___.

_____ _____
OWNERS

_____
MORTGAGEES OR LIEN HOLDERS

STATE OF _____)
) SS.
COUNTY OF _____)

THE FOREGOING CERTIFICATE OF OWNERSHIP WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20__, BY _____.

MY COMMISSION EXPIRES:_____ _____
NOTARY PUBLIC

(SEAL)

TOWN CLERK CERTIFICATE

I HEREBY CERTIFY THAT THIS INSTRUMENT WAS ADOPTED BY THE BOARD OF TRUSTEES BY (RESOLUTION/ ORDINANCE) NO. _____, SERIES 20____ ON THIS _____ DAY OF _____, 20_____, AND WAS FILED IN MY OFFICE ON THE _____DAY OF _____, 20_____, AT _____O'CLOCK ___M.

_____
LYDIA YECKE, TOWN CLERK

PLANNING COMMISSION CERTIFICATE

RECOMMENDED APPROVAL THIS _____DAY OF _____, 20__, BY THE TOWN OF SUPERIOR PLANNING COMMISSION, RESOLUTION NO. PC _____SERIES 20___.

BOARD OF TRUSTEES CERTIFICATE

APPROVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, STATE OF COLORADO.

WITNESS MY HAND WITH THE CORPORATE SEAL OF THE TOWN OF SUPERIOR THIS _____DAY OF _____ ____, 20____.

ATTEST:

_____ _____
LYDIA YECKE, TOWN CLERK — MARK LACIS, MAYOR

811 CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987 or 811
Know what's below. Call before you dig.
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

K2 CIVIL CONSULTANTS

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
COVER SHEET

PROJECT NO: KTD005.01
DESIGNED BY: AMG
DRAWN BY: AMG
DATE: 07/03/24

P0.0

P:\KT DEVELOPMENT\CO, SUPERIOR - MCCASLIN & MARSHALL RD\08 CAD\FDP\P0.0 COVER SHEET.DWG

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

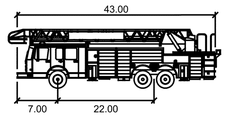
LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



LEGEND

- NEW BUILDING
- NEW ASPHALT PARKING / DRIVE ACCESS
- FDP LIMIT LINE
- DENOTES TRAFFIC FLOW PATTERNS
- DENOTES ADA ROUTE
- FIRE TRUCK/EMERGENCY ACCESS ROUTE

VEHICLE PROFILES



Mountainview Viper M12532

	feet
Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 33.3

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N

SCALE IN FEET
0 40 80

IF BAR DOES NOT MEASURE 1 INCH THEN DRAWING IS NOT TO SCALE

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

K2 CIVIL CONSULTANTS

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
CONTEXT SITE PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	07/03/24

P1.0

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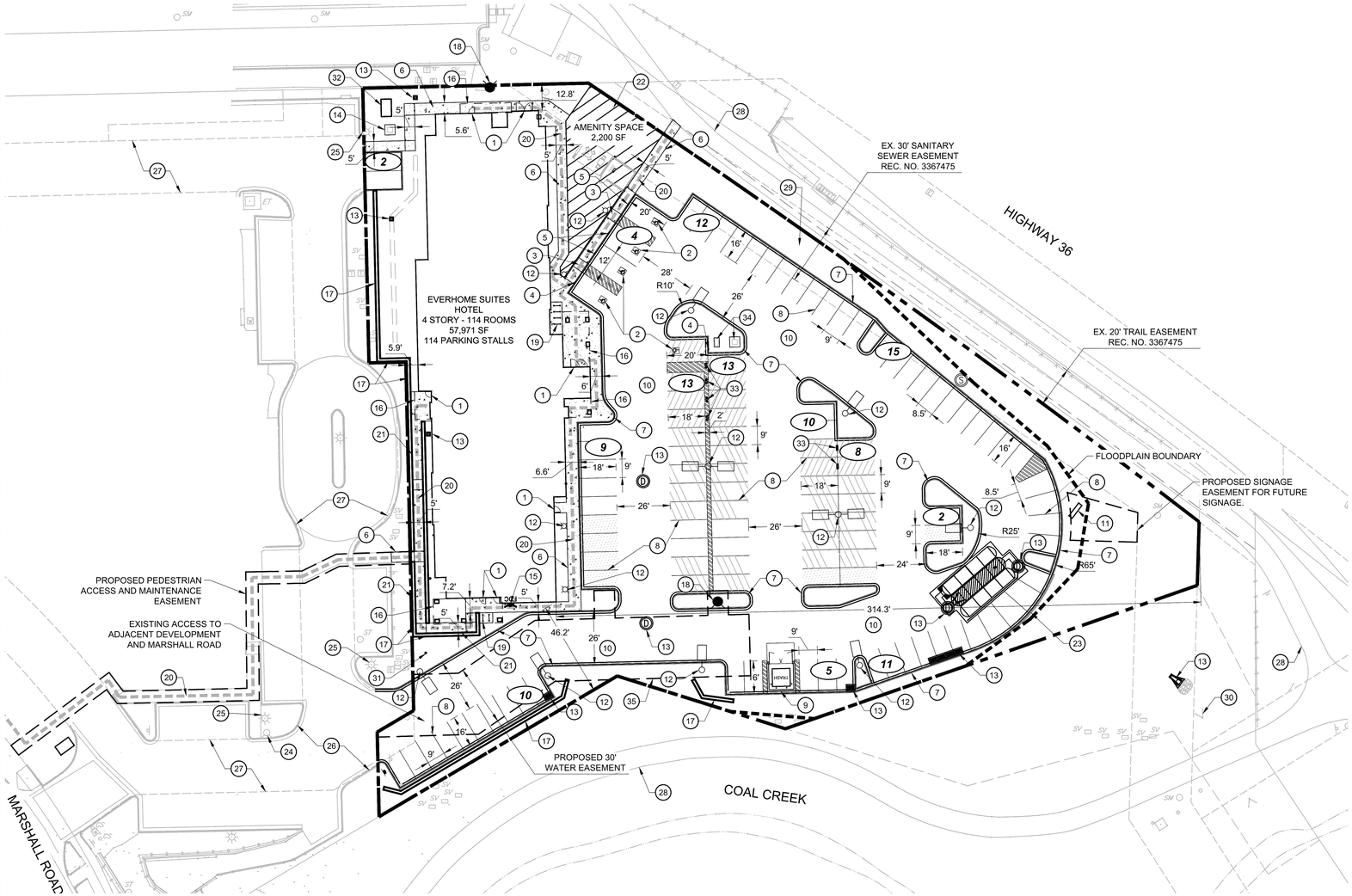
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



LEGEND

- PROPERTY LINE
- OFF-SITE PROPERTY LINE
- PROPOSED BUILDING
- PARKING COUNT
- EXISTING CURB AND GUTTER
- PROPOSED 6" CURB AND GUTTER
- PROPOSED SITE LIGHTING
- EXISTING/PROPOSED FIRE HYDRANT
- PROPOSED CONCRETE WALK
- DENOTES TRAFFIC FLOW PATTERNS
- DENOTES ADA ROUTE
- EXISTING STM & SAN. MANHOLES
- PROPOSED STORM GRATE/INLET
- PROPOSED STORM MANHOLE
- FLOODPLAIN LIMIT

SITE PLAN SCHEDULE

1. BUILDING ENTRY - REFER TO ARCHITECTURE DRAWINGS.
2. ADA PARKING STALL.
3. ADA CURB RAMP.
4. ADA VAN PARKING SIGNAGE.
5. ADA PARKING SIGNAGE.
6. CONCRETE SIDEWALK.
7. 6" CURB AND GUTTER.
8. 4" WHITE PAVEMENT MARKING (TYP.).
9. TRASH ENCLOSURE - SEE ARCHITECTURAL ELEVATIONS FOR ADDTIONAL DETAIL.
10. ASPHALT PAVEMENT.
11. FUTURE MONUMENT SIGN BY OTHERS. MAX HEIGHT: 15', MAX SIGN FACE AREA: 100 SF PER SIDE (50 PER TENANT) NO SINGLE TENANT SIGN GREATER THAN 50 SF, SETBACK 10'.
12. SITE LIGHTING - REFER TO PHOTOMETRICS PLAN.
13. STORM INFRASTRUCTURE, REFER TO UTILITY PLAN ON SHEET P3.0 FOR ADDITIONAL DETAIL.
14. BUILDING TRANSFORMER LOCATION.
15. FDC LOCATION.
16. BUILDING OVERHANG.
17. PROPOSED RETAINING WALL - SEE SHEET P2.1 FOR HEIGHT.
18. PROPOSED FIRE HYDRANT.
19. PROPOSED BIKE RACKS, 12 TOTAL STALLS (8 UNCOVERED AT MAIN BUILDING ENTRANCE AND 4 COVERED AT SOUTH BUILDING ENTRANCE).
20. ADA ROUTE
21. PROPOSED ADA RAMP WITH HANDRAILS.
22. PROPOSED AMENITY SPACE.
23. PROPOSED EXTENDED CURB.
24. EXISTING FIRE HYDRANT.
25. EXISTING LIGHT POLE.
26. EXISTING CURB AND GUTTER.
27. EXISTING ACCESS, UTILITY, AND EMERGENCY ACCESS EASEMENT TO BE MODIFIED.
28. EXISTING CONCRETE TRAIL.
29. SNOW STORAGE AREA.
30. EXISTING RIPRAP SWALE.
31. PROPOSED PET RELIEF STATION
32. PROPOSED PREFABRICATED SMOKING SHELTER
33. PROPOSED EV CHARGING PEDESTAL.
34. PROPOSED EV CHARGING TRANSFORMER AND PANELS.
35. PROPOSED 30' WIDE WATER UTILITY EASEMENT.

EV STALL LEGEND

- EV INSTALLED STALL (LOT 1 - 12 STALLS)
- EV READY (LOT 1 - 24 STALLS)
- EV CAPABLE (LOT 1 - 8 STALLS)

DEVELOPMENT STANDARDS		
PARKING	**REQUIRED**	**PROVIDED**
HOTEL	1 SPACE / GUEST ROOM = 114 SPACES	114 SPACES
ACCESSIBLE	5 SPACES	5 SPACES
BUILDING SETBACKS	**REQUIRED**	**PROVIDED**
FRONT (WEST)	0' MIN - NO MAX	5.9'
REAR (EAST)	0' MIN - NO MAX	314.3'
SIDE (NORTH)	10' MIN - NO MAX	12.8'
SIDE (SOUTH)	0' MIN - NO MAX	46.2'
MAXIMUM HEIGHT	**REQUIRED**	**PROVIDED**
	90'	56'
# OF BUILDING STORIES	4 STORIES	
BUILDING FOOTPRINT (SF)	14,901 SF	
PROPOSED USE	HOTEL (57,971 SF)	
OPEN SPACE SUMMARY	**REQUIRED ACREAGE (% OF TOTAL SITE)**	**PROVIDED ACREAGE (% OF TOTAL SITE)**
	0.39 AC (20%)	0.45 AC (23%)

PARKING STALL SUMMARY		
PARKING STALL SIZE	**#**	**%**
9'X18'	42	37%
12'X20' (ADA STALLS)	5	4%
9'X20'	14	12%
9'X16'	27	24%
8.5'X16'	26	23%
TOTAL	**114**	**100%**

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N

SCALE IN FEET
0 30 60

IF BAR DOES NOT MEASURE 1 INCH THEN DRAWING IS NOT TO SCALE

No.	REVISION	BY	DATE

PRELIMINARY
NOT FOR
CONSTRUCTION

K2 CIVIL CONSULTANTS

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
SITE PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	07/03/24

P1.1

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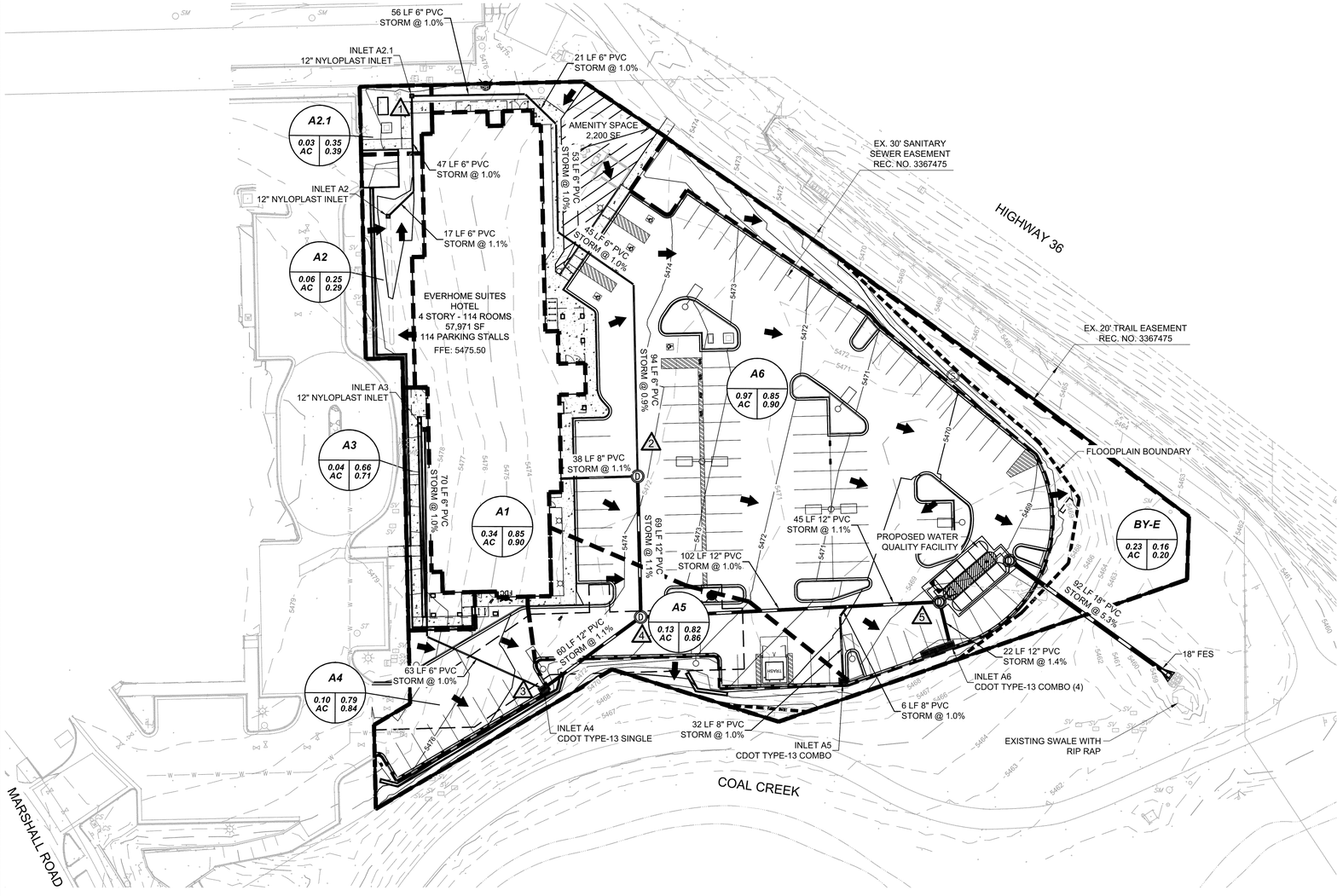
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



LEGEND

- PROPOSED CONTOURS
- EXISTING CONTOURS
- PROPOSED EASEMENT
- PROPOSED BASIN DELINEATION
- PROPOSED BUILDING SETBACK
- PROPOSED BUILDING
- EXISTING CURB AND GUTTER
- PROPOSED 6" CURB AND GUTTER
- EXISTING STORM SEWER LINE
- PROPOSED STORM SEWER LINE
- PROPOSED STORM MANHOLES
- EXISTING STORM MANHOLES
- PROPOSED STORM INLET/GRATE
- EXISTING STORM INLET
- FLOW ARROW AND GRADE
- FLOODPLAIN LIMIT
- DRAINAGE FLOW ARROW
- DESIGN POINT
- BASIN DESIGNATION
- 5-YEAR RUNOFF COEFFICIENT
- 100-YEAR RUNOFF COEFFICIENT
- BASIN AREA IN ACRES

BASIN SUMMARY

DESIGN POINT	TRIBUTARY BASIN	AREA (AC)	PERCENT IMPERVIOUS	COEFFICIENT		TOTAL RUNOFF*	
				C5	C100	Q5 (CFS)	Q100 (CFS)
1	A2	0.06	14.6	0.25	0.29	0.06	0.12
	A2.1	0.03	28.0	0.35	0.39	0.03	0.07
2	A1	0.34	90.0	0.85	0.90	1.31	2.67
3	A3	0.04	70.2	0.66	0.71	0.13	0.26
	A4	0.10	87.6	0.79	0.84	0.34	0.70
4	A5	0.13	91.2	0.82	0.86	0.50	1.01
5	A6	0.97	96.3	0.85	0.90	3.67	7.45
	BY-E	0.30	2.0	0.16	0.20	0.22	0.52
Total Proposed Site		1.97	76.1	0.71	0.76	6.26	12.80

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

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N

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0 30 60

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No.	REVISION	BY	DATE

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K2 CIVIL CONSULTANTS

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
DRAINAGE PLAN

PROJECT NO: KTD005.01
DESIGNED BY: AMG
DRAWN BY: AMG
DATE: 06/07/24

P2.0

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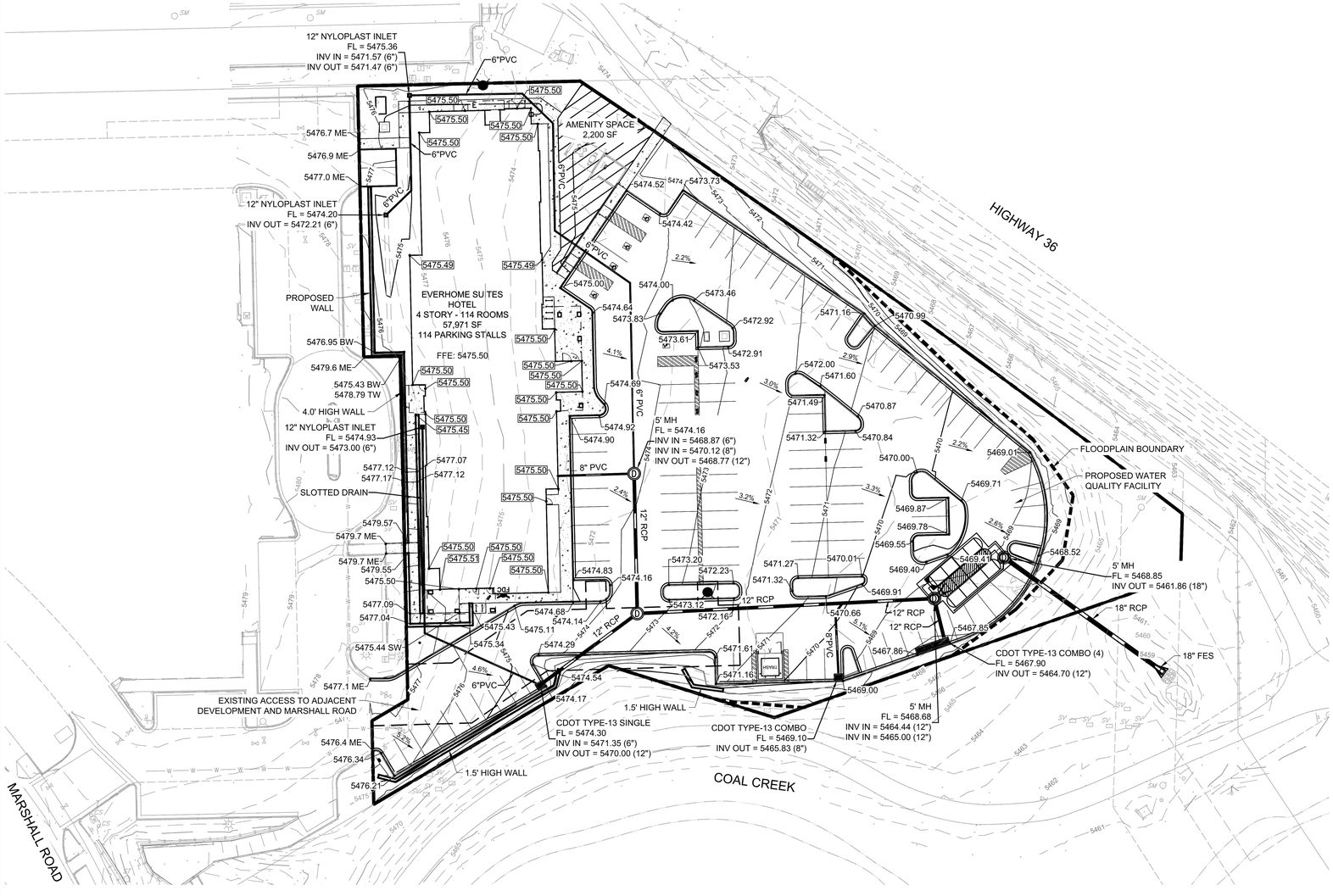
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



LEGEND

- PROPOSED CONTOURS
- EXISTING CONTOURS
- PROPOSED EASEMENT
- FLOODPLAIN LIMIT
- PROPOSED BUILDING SETBACK
- PROPOSED BUILDING
- EXISTING CURB AND GUTTER
- PROPOSED 6" CURB AND GUTTER
- EXISTING STORM SEWER LINE
- PROPOSED STORM SEWER LINE
- PROPOSED STORM MANHOLES
- EXISTING STORM MANHOLES
- PROPOSED STORM INLET/GRATE
- EXISTING STORM INLET
- PROPOSED FLOW LINE ELEVATION
- PROPOSED EXTERIOR GRADE AT FOUNDATION
- PROPOSED SIDEWALK ELEVATION
- PROPOSED GRADE TO MATCH EXISTING
- PROPOSED FINISHED GRADE
- FLOW ARROW AND GRADE

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

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N

SCALE IN FEET
0 30 60

IF BAR DOES NOT MEASURE 1 INCH THEN DRAWING IS NOT TO SCALE

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

K2 CIVIL CONSULTANTS

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
GRADING PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	06/07/24

P2.1

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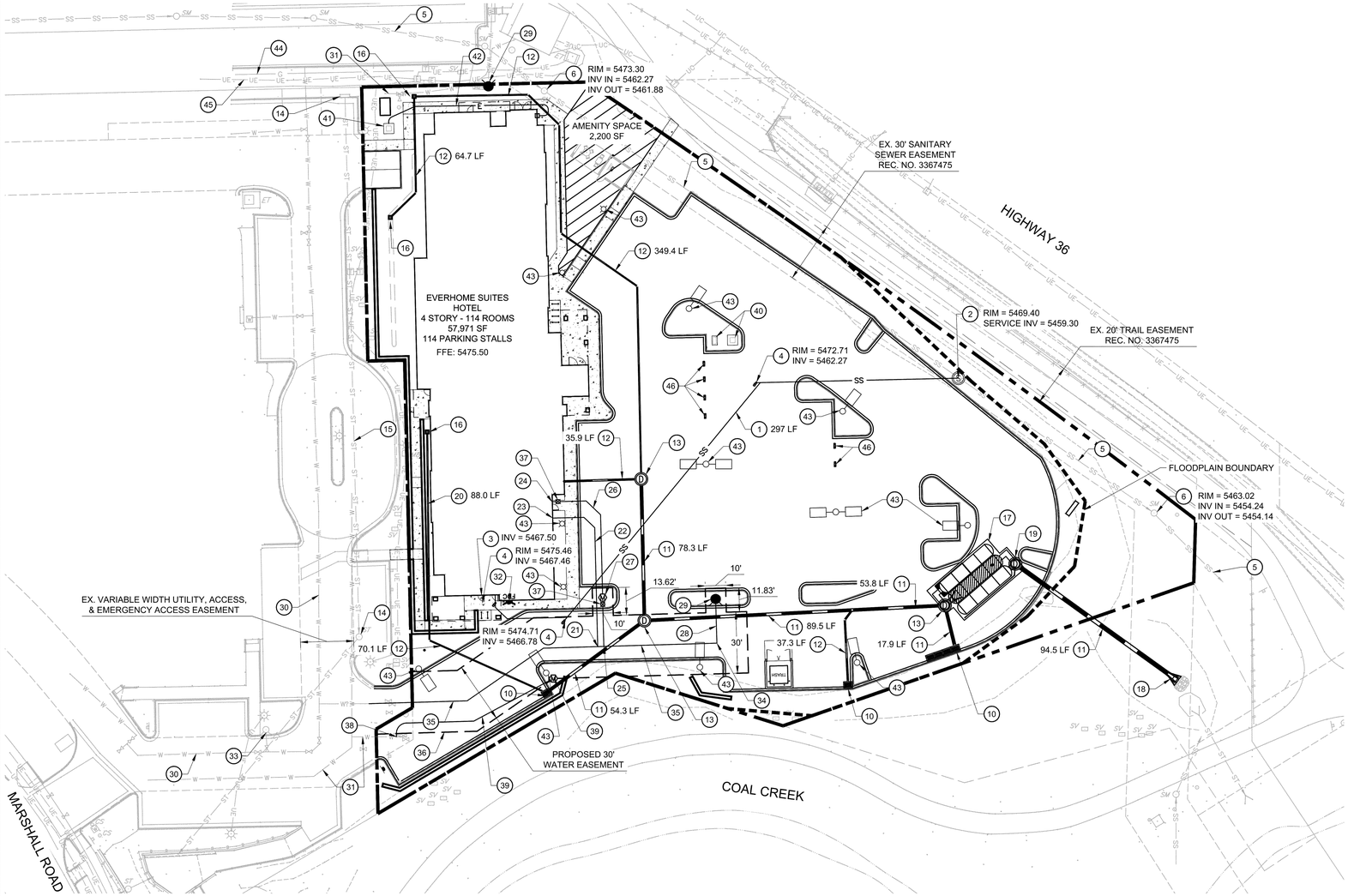
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



UTILITY NOTES:

1. ALL ITEMS IN SCHEDULE ARE PROPOSED UNLESS OTHERWISE NOTED.
2. ALL EXISTING ITEMS IN SCHEDULE ARE TO REMAIN UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL ENCASE ALL STORM SEWER JOINTS IN CONCRETE A MINIMUM OF 10' ON EACH SIDE OF THE WATER LINE CROSSING.

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

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TOWN OF SUPERIOR UTILITY MAINTENANCE STATEMENT

ALL PUBLIC WATER, REUSE WATER, STORM SEWER, AND SANITARY SEWER MAINS AND APPURTENANCES LOCATED IN PUBLIC ROW SHALL BE MAINTAINED BY THE TOWN'S PUBLIC WORKS AND UTILITIES DEPARTMENT. ALL PUBLIC WATER, REUSE WATER, STORM SEWER, SANITARY SEWER MAINS, AND APPURTENANCES UNDER PRIVATE DRIVES ARE LOCATED IN UTILITY EASEMENTS. THE TOWN IS RESPONSIBLE FOR MAINTENANCE OF THESE FACILITIES. THE TOWN IS NOT RESPONSIBLE FOR REPAIR OR REPLACEMENT OF PRIVATE DRIVE, CURB AND GUTTER, OR LANDSCAPING DAMAGED DURING UTILITY REPAIR OR MAINTENANCE.

LEGEND

- PROPOSED EASEMENT
- PROPERTY LINE
- PROPOSED BUILDING
- EXISTING CURB AND GUTTER
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER LINE
- PROPOSED SANITARY SEWER
- PROPOSED GAS LINE
- PROPOSED UNDERGROUND ELECTRIC LINE
- PROPOSED WATER LINE
- PROPOSED WATER METER
- PROPOSED FIRE DEPARTMENT CONNECTION
- PROPOSED FIRE HYDRANT
- FLOODPLAIN LIMIT
- PROPOSED STORM MANHOLES
- EXISTING STORM MANHOLES
- PROPOSED STORM INLET
- PROPOSED CLEANOUT

UTILITY SCHEDULE

SANITARY

1. PROPOSED 6" SANITARY SERVICE @ 2% MINIMUM SLOPE.
2. PROPOSED SANITARY SEWER MANHOLE AT SERVICE CONNECTION TO EXISTING SEWER.
3. PROPOSED 6" SANITARY SERVICE CONNECTION TO BUILDING.
4. PROPOSED SANITARY CLEANOUT.
5. EXISTING 15" PVC SANITARY SEWER MAIN.
6. EXISTING SANITARY SEWER MANHOLE.

STORMWATER

10. PROPOSED TYPE 13 COMBO INLET.
11. PROPOSED 12"-18" RCP STORM SEWER PIPE.
12. PROPOSED 6" PVC STORM SEWER PIPE.
13. PROPOSED 5' STORM MANHOLE.
14. EXISTING STORM SEWER INFRASTRUCTURE
15. EXISTING STORM SEWER PIPE.
16. PROPOSED 12" NYOPLAST AREA INLET.
17. PROPOSED ADS STORMWATER TREATMENT SYSTEM.
18. PROPOSED 18" FLARED END SECTION.
19. PROPOSED OUTLET CONTROL STRUCTURE.
20. PROPOSED DURASLOT SLOTTED DRAIN.

WATER

21. PROPOSED 6" FIRE LINE CONNECTION TO 12" PVC WATER LINE.
22. PROPOSED 6" FIRE LINE SERVICE
23. PROPOSED 6" FIRE LINE CONNECTION TO BUILDING, BACKFLOW PREVENTOR LOCATED INSIDE THE BUILDING.
24. PROPOSED 2" DOMESTIC CONNECTION TO BUILDING. BACKFLOW PREVENTOR LOCATED INSIDE THE BUILDING.
25. PROPOSED 2" DOMESTIC CONNECTION TO 12" PVC WATER LINE.
26. PROPOSED 2" DOMESTIC SERVICE.
27. PROPOSED 2" DOMESTIC WATER METER.
28. PROPOSED 6" FIRE HYDRANT LINE.
29. PROPOSED FIRE HYDRANT.
30. EXISTING WATER MAIN.
31. EXISTING IRRIGATION MAIN.
32. PROPOSED FDC LOCATION.
33. EXISTING FIRE HYDRANT.
34. PROPOSED 6" FIRE HYDRANT CONNECTION TO 12" PVC WATER LINE.
35. PROPOSED 12" PVC WATER LINE EXTENSION.
36. 30' WIDE WATER UTILITY EASEMENT.
37. PROPOSED 2" BALL VALVE.
38. PROPOSED 1" IRRIGATION LINE CONNECTION TO 8" NON-POTABLE MAIN.
39. PROPOSED 1" IRRIGATION LINE & METER. REFER TO IRRIGATION PLAN FOR CONTINUATION.

DRY UTILITIES

40. PROPOSED EV CHARGING TRANSFORMER AND PANELS.
41. PROPOSED BUILDING TRANSFORMER LOCATION - GENERAL CONTRACTOR TO FINALIZE LOCATION WITH UTILITY PROVIDER.
42. PROPOSED ELECTRIC SERVICE
43. PROPOSED SITE LIGHTING (REFER TO PHOTOMETRIC PLANS FOR FINAL LOCATION).
44. EXISTING GAS MAIN.
45. EXISTING UNDERGROUND ELECTRIC.
46. PROPOSED EV CHARGING PEDESTAL.

N

SCALE IN FEET
0 30 60

IF BAR DOES NOT MEASURE 1 INCH THEN DRAWING IS NOT TO SCALE

No.	REVISION	BY	DATE

PRELIMINARY
NOT FOR
CONSTRUCTION

K2 CIVIL CONSULTANTS

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

UTILITY PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	06/07/24

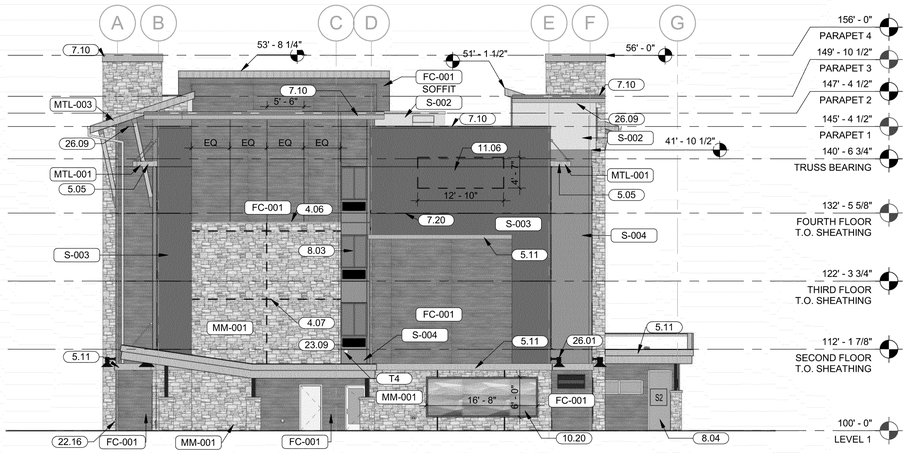
P3.0

P:\KT DEVELOPMENT\CO, SUPERIOR - MCCASLIN & MARSHALL RD\08 CAD\FDP\P3.0 UTILITY PLAN.DWG

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

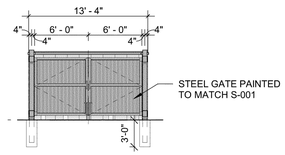


2 SOUTH ELEVATION

3/32" = 1'-0"

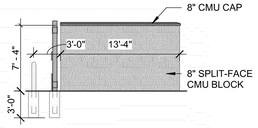
SOUTH FRONTAGE = 59'-0" - SIGNAGE AREA = 59 SF

EVERHOME SUITES WILL COORDINATE WITH THE TOWN'S CULTURAL ARTS AND PUBLIC SPACES ADVISORY COMMITTEE (CAPS) TO ENSURE THE FINAL DESIGN REPRESENTS THE INTEGRITY OF THE DOWNTOWN SUPERIOR AESTHETICS. LOCAL MURAL WILL BE PAID FOR BY THE APPLICANT AND MUST BE COMPLETED PRIOR TO ISSUANCE OF CERTIFICANT OF OCCUPANCY FOR THE PROJECT UNLESS AN EXTENSION IS GRANTED BY THE TOWN.



3 TRASH ENCLOSURE GATE ELEVATION

1/8" = 1'-0"



4 TRASH ENCLOSURE ELEVATION SIDE

1/8" = 1'-0"

KEYNOTES

Tag	Keynote Description
4.06	MANUFACTURED MASONRY CAP OR SILL
4.07	CULTURED STONE EXPANSION JOINT, SPACING NOT TO EXCEED 10'-0" IN EITHER DIRECTION, REF MANUFACTURER REQ
5.05	METAL AWNING
5.11	BRAKE METAL WRAPPED ACCENT BAND GA. 20, REF A500
7.10	PARAPET WALL METAL CAP FLASHING OVER CONTINUOUS METAL CLEAT, SLOPED TO MAIN ROOF FOR DRAINAGE (PAINTED)
7.20	STUCCO 1" METAL REVEAL
8.03	SLIDING WINDOW, TYP.: SEE SPECS
8.04	STOREFRONT WINDOWS WITH CLEAR ANODIZED ALUMINUM FRAME
10.20	LOCAL WALL MURAL
11.06	BUILDING SIGNAGE UNDER SEPARATE PERMIT; PROVIDE BLOCKING AND COORDINATE LOCATION, CONNECTION REQUIREMENTS, AND POWER WITH SIGNAGE VENDOR
22.16	ROOF DISCHARGE NOZZLE, REF PLUMBING SHEETS, 18" ABOVE GRADE
23.08	EXTERIOR VENT, REF MECHANICAL PLANS. PAINT TO MATCH ADJACENT FINISH
23.09	THRU-WALL HVAC UNIT W/ GRILLE FLUSH W/ EXT. MATERIAL, REF HVAC SHEETS
26.01	SURFACE MOUNTED FIXTURE, REF ELECTRICAL
26.09	EXTERIOR LIGHTING, REF MEP

FINISH KEYNOTES

Tag	Keynote Description
FC-001	FIBER CEMENT - NICHIHA VINTAGEWOOD "SPRUCE"
MM-001	MFR. MASONRY - EL DORADO "GRAND BANKS LIMESTONE"
MTL-001	FLAT SEAM METAL PANEL - LEAD-COTE
MTL-002	PREFINISHED BRAKE METAL WRAP GA. 20 - BERRIDGE METAL - LEAD-COTE
MTL-003	STANDING SEAM METAL ROOF - "LEAD-COTE"
S-001	STUCCO - SW 2850 "CHELSEA GRAY"
S-002	STUCCO - SW 7056 "RESERVED WHITE"
S-003	STUCCO - SW 6243 "DISTANCE"
S-004	STUCCO - SW 9163 "TIN LIZZIE"

TECHNOLOGY NOTES

Tag	Keynote Description
T4	(6) EXTERIOR CAMERAS TO BE INSTALLED 12FT ABOVE GROUND



1 EAST ELEVATION

3/32" = 1'-0"

EAST FRONTAGE = 239'-0" - SIGNAGE AREA = 192 SF

EVERHOME SUITES WILL COORDINATE WITH THE TOWN'S CULTURAL ARTS AND PUBLIC SPACES ADVISORY COMMITTEE (CAPS) TO ENSURE THE FINAL DESIGN REPRESENTS THE INTEGRITY OF THE DOWNTOWN SUPERIOR AESTHETICS. LOCAL MURAL WILL BE PAID FOR BY THE APPLICANT AND MUST BE COMPLETED PRIOR TO ISSUANCE OF CERTIFICANT OF OCCUPANCY FOR THE PROJECT UNLESS AN EXTENSION IS GRANTED BY THE TOWN.

811 Know what's below. Call before you dig.

CALL UTILITY NOTIFICATION CENTER OF COLORADO

1-800-922-1987 or 811

CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

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No.	REVISION	BY	DATE

PRELIMINARY
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101architecture
ARCHITECTURE - PLANNING - INTERIORS
8400 E. CRESENT PARKWAY, SUITE 160
GREENWOOD VILLAGE, CO 80111
VOICE: 720-881-1600

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

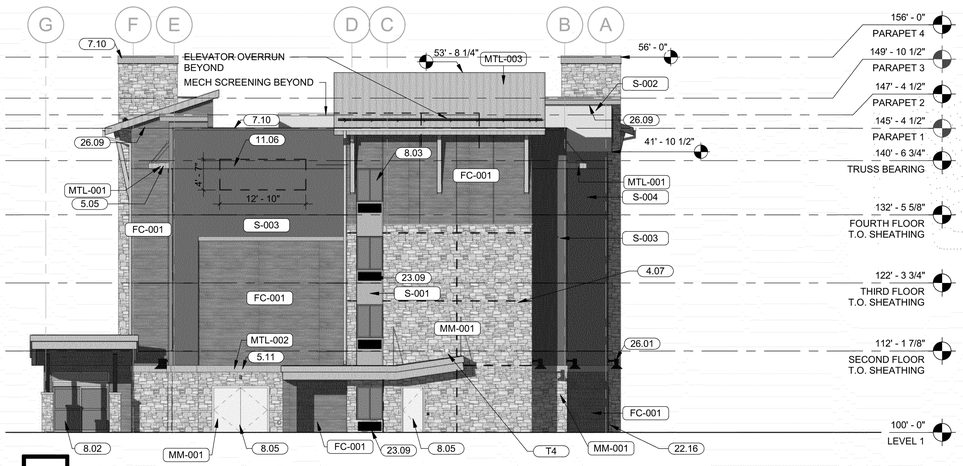
PROJECT NO:	CO533
DESIGNED BY:	BG
DRAWN BY:	FM
DATE:	05/31/24

A2.0

FINAL DEVELOPMENT PLAN

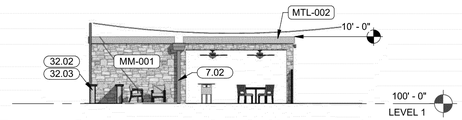
EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

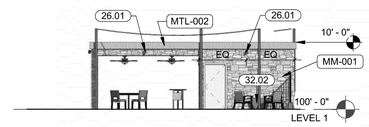


2 NORTH ELEVATION
3/32" = 1'-0"

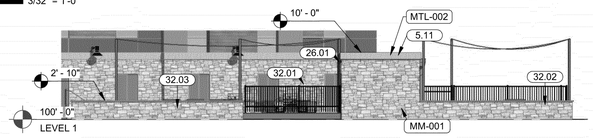
NORTH FRONTAGE = 59'-0" - SIGNAGE AREA 59 SF



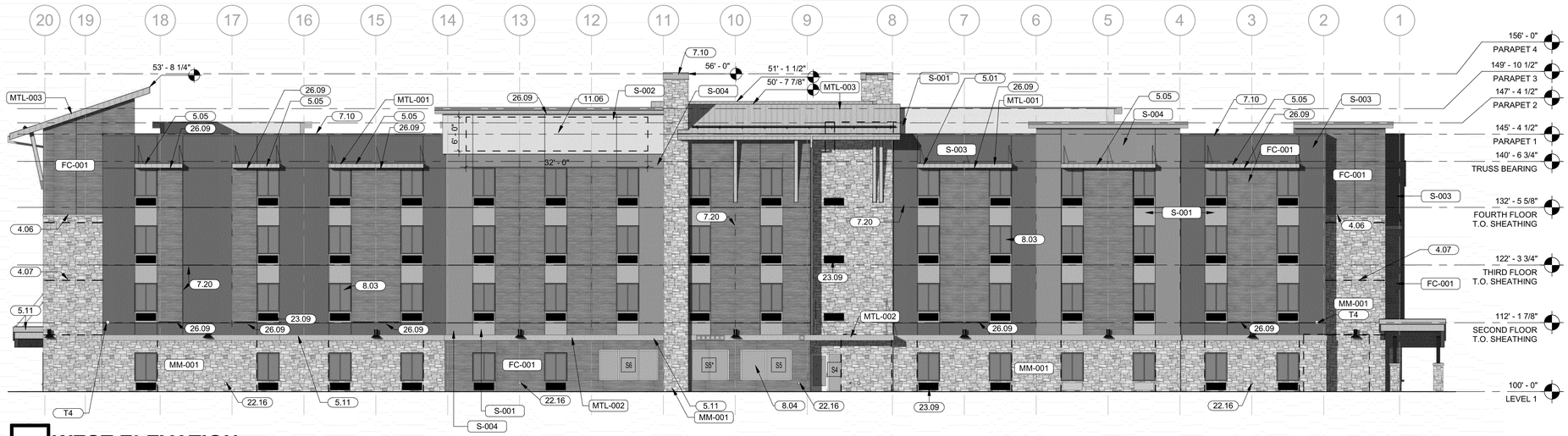
5 AMENITY BUILDING ELEVATION
3/32" = 1'-0"



4 AMENITY BUILDING ELEVATION
3/32" = 1'-0"



3 AMENITY AREA ELEVATION
3/32" = 1'-0"



1 WEST ELEVATION
3/32" = 1'-0"

WEST FRONTAGE = 236'-6" - SIGNAGE AREA = 192 SF

KEYNOTES

Tag	Keynote Description
4.06	MANUFACTURED MASONRY CAP OR SILL
4.07	CULTURED STONE EXPANSION JOINT, SPACING NOT TO EXCEED 10'-0" IN EITHER DIRECTION, REF MANUFACTURER REQ
5.01	HEAVY DUTY STEEL ANGLE BRACES, REF E5/A5.0
5.05	METAL AWNING
5.11	BRAKE METAL WRAPPED ACCENT BAND GA. 20, REF A500
7.02	COLLECTOR HEAD AND DOWNSPOUT, COLOR TO MATCH ADJACENT
7.10	PARAPET WALL METAL CAP FLASHING OVER CONTINUOUS METAL CLEAT, SLOPED TO MAIN ROOF FOR DRAINAGE (PAINTED)
7.20	STUCCO 1" METAL REVEAL
8.02	STOREFRONT AUTOMATED SLIDING DOOR PACKAGE WITH CLEAR ANODIZED ALUMINUM FRAME
8.03	SLIDING WINDOW, TYP.; SEE SPECS
8.04	STOREFRONT WINDOWS WITH CLEAR ANODIZED ALUMINUM FRAME
8.05	HOLLOW METAL DOOR AND FRAME, PAINT TO MATCH ADJACENT FINISH
11.06	BUILDING SIGNAGE UNDER SEPARATE PERMIT; PROVIDE BLOCKING AND COORDINATE LOCATION, CONNECTION REQUIREMENTS, AND POWER WITH SIGNAGE VENDOR
22.16	ROOF DISCHARGE NOZZLE, REF PLUMBING SHEETS, 18" ABOVE GRADE
23.09	THRU-WALL HVAC UNIT W/ GRILLE FLUSH W/ EXT. MATERIAL, REF HVAC SHEETS
26.01	SURFACE MOUNTED FIXTURE, REF ELECTRICAL
26.09	EXTERIOR LIGHTING, REF MEP
32.01	FENCES AND GATES REF. LANDSCAPE SHEETS
32.02	MANUFACTURED FIRE PITS AND PLANTERS REF. LANDSCAPE SHEETS
32.03	LANDSCAPE KNEE WALLS AND BUILT-IN-GRILLS REF. LANDSCAPE SHEETS

FINISH KEYNOTES

Tag	Keynote Description
FC-001	FIBER CEMENT - NICHIHA VINTAGEWOOD "SPRUCE"
MM-001	MFR. MASONRY - EL DORADO "GRAND BANKS LIMESTONE"
MTL-001	FLAT SEAM METAL PANEL - LEAD-COTE
MTL-002	PREFINISHED BRAKE METAL WRAP GA. 20 - BERRIDGE METAL - LEAD-COTE
MTL-003	STANDING SEAM METAL ROOF - "LEAD-COTE"
S-001	STUCCO - SW 2850 "CHELSEA GRAY"
S-002	STUCCO - SW 7056 "RESERVED WHITE"
S-003	STUCCO - SW 6243 "DISTANCE"
S-004	STUCCO - SW 9163 "TIN LIZZIE"

TECHNOLOGY NOTES

Tag	Keynote Description
T4	(6) EXTERIOR CAMERAS TO BE INSTALLED 12FT ABOVE GROUND

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CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987 or 811
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

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No.	REVISION	BY	DATE

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1 architecture
ARCHITECTURE - PLANNING - INTERIORS
8400 E. CRESENT PARKWAY, SUITE 160
GREENWOOD VILLAGE, CO 80111
VOICE: 720-961-1600

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

PROJECT NO:	CO533
DESIGNED BY:	BG
DRAWN BY:	FM
DATE:	07/03/24

A2.1

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3









811
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No.	REVISION	BY	DATE

PRELIMINARY
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CONSTRUCTION

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ARCHITECTURE - PLANNING - INTERIORS
8400 E. CRESENT PARKWAY, SUITE 160
GREENWOOD VILLAGE, CO 80111
VOICE: 720-881-1600

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EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

PROJECT NO:	CO533
DESIGNED BY:	BG
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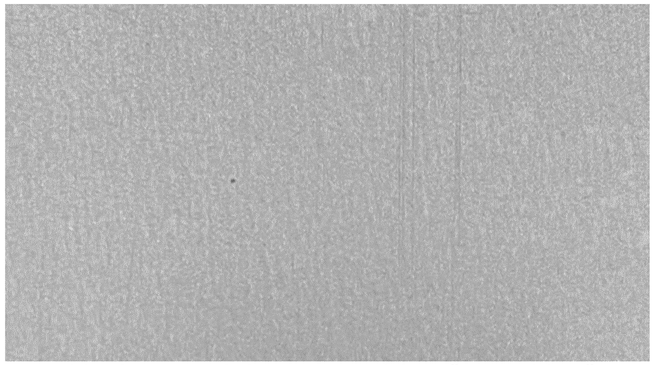
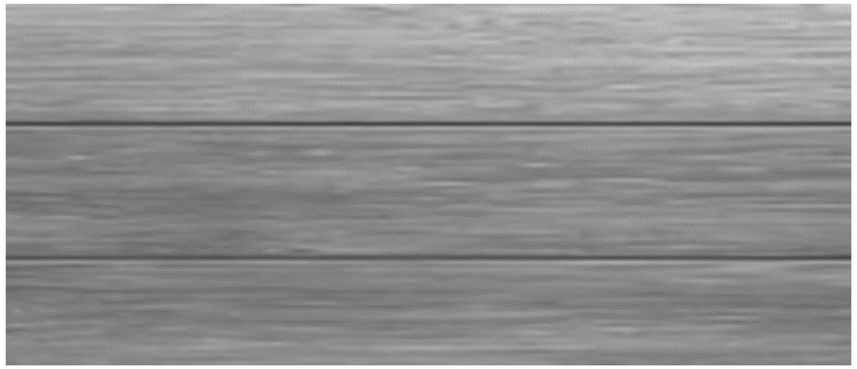
DATE:	07/03/24

A2.2

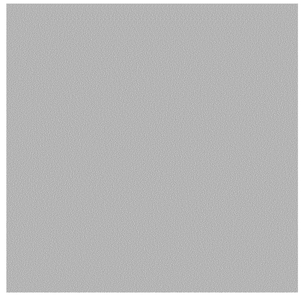
FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



MTL-001 STANDING SEEM MTL ROOF - "LEAD COTE"

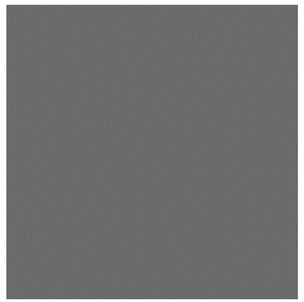


FC-001 NICHIHA VINTAGEWOOD "SPRUCE"

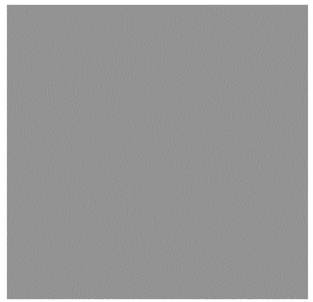


S-001 SW2850
CHELSEA GRAY

S-002 SW7056
RESERVED WHITE



S-003 SW6243
DISTANCE



S-004 SW 9163
TIN LIZZIE



MM-001 ELDORADO STONE - GRAND BANKS LIMESTONE

KEYNOTES

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8.04	STOREFRONT WINDOWS WITH CLEAR ANODIZED ALUMINUM FRAME
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22.16	ROOF DISCHARGE NOZZLE, REF PLUMBING SHEETS, 18" ABOVE GRADE
23.09	THRU-WALL HVAC UNIT W/ GRILLE FLUSH W/ EXT. MATERIAL, REF HVAC SHEETS
26.01	SURFACE MOUNTED FIXTURE, REF ELECTRICAL
26.09	EXTERIOR LIGHTING, REF MEP
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TECHNOLOGY NOTES

Tag	Keynote Description
T4	(6) EXTERIOR CAMERAS TO BE INSTALLED 12FT ABOVE GROUND

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No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

1@1 architecture
ARCHITECTURE - PLANNING - INTERIORS
8400 E. CRESENT PARKWAY, SUITE 160
GREENWOOD VILLAGE, CO 80111
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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

PROJECT NO:	CO533
DESIGNED BY:	BG
DRAWN BY:	FM
DATE:	07/03/24

A2.3

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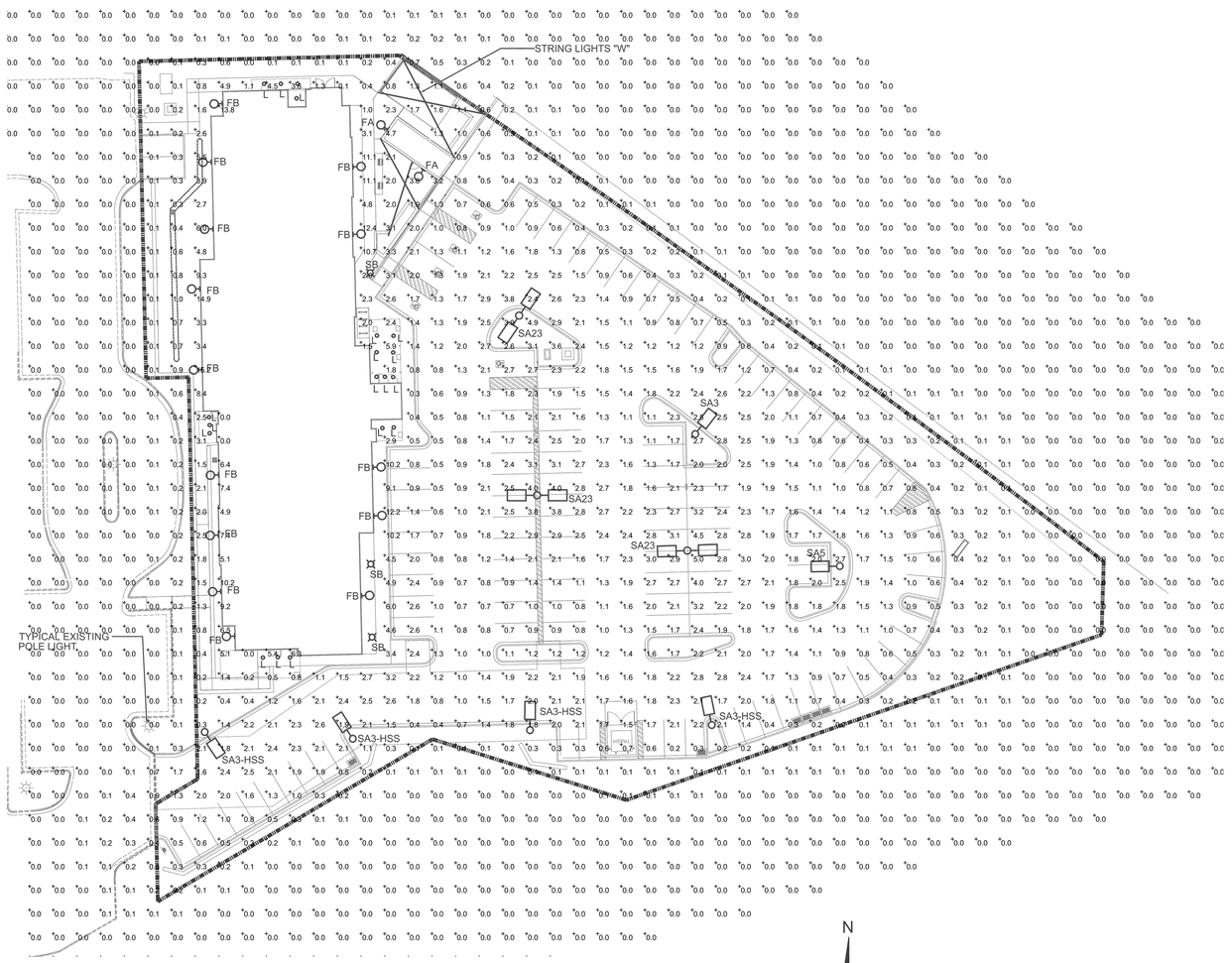
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



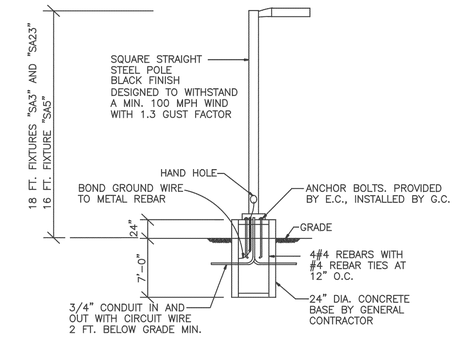
SITE PHOTOMETRIC PLAN

SCALE: 1" = 30'-0"

N

SITE PHOTOMETRIC SUMMARY
AVERAGE = 0.6 FT. CANDLE
MAXIMUM = 14.7 FT. CANDLE
MINIMUM = 0.0 FT. CANDLE

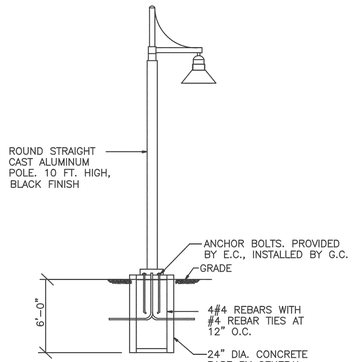
NOTE ON LIGHTING CONTROLS:
ALL SITE LIGHTS ON THESE PLANS SHALL BE PHOTO CELL CONTROLLED AND OPERATE DUSK UNTIL DAWN, EXCEPT FOR AMENITY AREA. AMENITY AREA LIGHTS, INCLUDING STRING LIGHTS "W" SHALL BE CONTROLLED WITH LOCAL SWITCHES AND WITH TIME SWITCH TO BE TURNED OFF AUTOMATICALLY AT 10 PM.



POLE MOUNTED FIXTURES INSTALLATION DETAIL

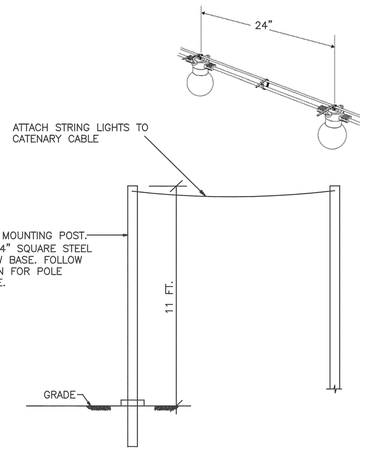
FIXTURES "SA3", "SA23", "SA5"

NO SCALE



POLE MOUNTED FIXTURE "SB"

NO SCALE



STRING LIGHTS "W" INSTALLATION

NO SCALE

LIGHTING FIXTURE SCHEDULE

ITEM	MANUFACTURER	CAT. NO.	LAMPS	L.L.F.	DESCRIPTION
L	ELITE LIGHTING	ER3-LED-IC-700L-DIM10120-MWD-90-ER3-F-1307-W	15W, 3000K LED 700 LUMENS	1.0	3" EXTERIOR CANOPY RECESSED DOWN LIGHT
FA	GENESIS	GLSWPSL-20W-4000-120/277-BRONZE	20W, 3000K LED 1,200 LUMENS	1.0	WET LOCATION FULL CUT OFF WALL LIGHT, INSTALLED AT +12 FT ABOVE GRADE ON BUILDING TO BOTTOM OF FIXTURE
FB	STERNBERG	GL1960 MEDIUM-1W-S-BSS-SV1-BKT-12L-30-T2-MDL006	20W, 3000K LED 2,780 LUMENS	1.0	EXTERIOR ROUND SHADE WALL LIGHT. BLANK TOP, SOLID RINGS, FULL CUT OFF INSTALLED AT +7'-8" ABOVE GRADE TO BOTTOM OF FIXTURE
SA3	LUMARK	PREVAIL PETITE DISCRETE PRV-P-PA1A-730-U-T3-BK	31W, 3000K LED 4,443 LUMENS	1.0	SINGLE-HEAD FULL CUT OFF POLE LIGHT ON 16 FT. SQUARE POLE ON TOP OF 2 FT CONCRETE BASE. TYPE III OPTICS
SA3-HSS	LUMARK	PREVAIL PETITE DISCRETE PRV-P-PA1A-730-U-T3-BK-HSS	31W, 3000K LED 4,443 LUMENS	1.0	SINGLE-HEAD FULL CUT OFF POLE LIGHT ON 16 FT. SQUARE POLE ON TOP OF 2 FT CONCRETE BASE. TYPE III OPTICS, HOUSE SIDE SHIELD
SA23	LUMARK	PREVAIL DISCRETE PRV-PA1A-730-U-T3-BK	64W, 3000K LED 6,899 LUMENS EACH	1.0	DOUBLE-HEAD FULL CUT OFF POLE LIGHT ON 16 FT. SQUARE POLE ON TOP OF 2 FT CONCRETE BASE. TYPE III OPTICS
SA5	LUMARK	PREVAIL DISCRETE PRV-PA1A-730-U-T5WQ-BK	54W, 3000K LED 7,831 LUMENS	1.0	SINGLE-HEAD FULL CUT OFF POLE LIGHT ON 14 FT. SQUARE POLE ON TOP OF 2 FT CONCRETE BASE. TYPE V SQUARE OPTICS
SB	STREETWORKS	EPIC MEDIUM MEM-E01LED-E1-T3-SO-SW-BK-7030-SA6159	25W, 3000K LED 2,936 LUMENS	1.0	PEDESTRIAN ROUND SHADE POLE LIGHT ON 10 FT ROUND POLE, BLACK FINISH, SOLID BODY, NO GLASS WINDOW
W	GENESIS	LS2-M 120V-24"-3000-BK	3000K E26 LED	1.0	COMMERCIAL GRADE EXTERIOR STRING LIGHTS, BLACK FINISH, 24" SPACING PROVIDE WITH GUIDE WIRE AND 11 FT ROUND BLACK MOUNTING POLES

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1-800-922-1987 or 811
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

D:\RGEC DROPBOX\JOBS\JOBS\2024\EVERHOME SUITES SUPERIOR CO\SITE PHOTOMETRICS\PH-1.DWG

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

10@1architecture
ARCHITECTURE - PLANNING - INTERIORS
8400 E. CRESENT PARKWAY, SUITE 160
GREENWOOD VILLAGE, CO 80111
VOICE: 720-881-1600

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
SITE PHOTOMETRIC PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	07/03/24

PH.1

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

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fusion LIGHTING By Elite Lighting

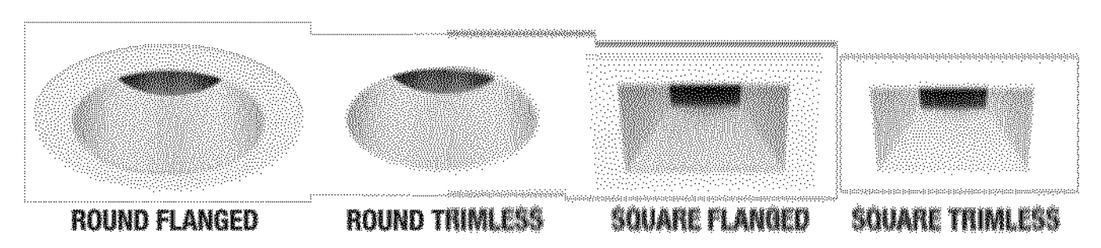
FIXTURE "L"

ER3-LED-IC 3"

3" Architectural High Lumen Adjustable LED Downlight



TRIM OPTIONS

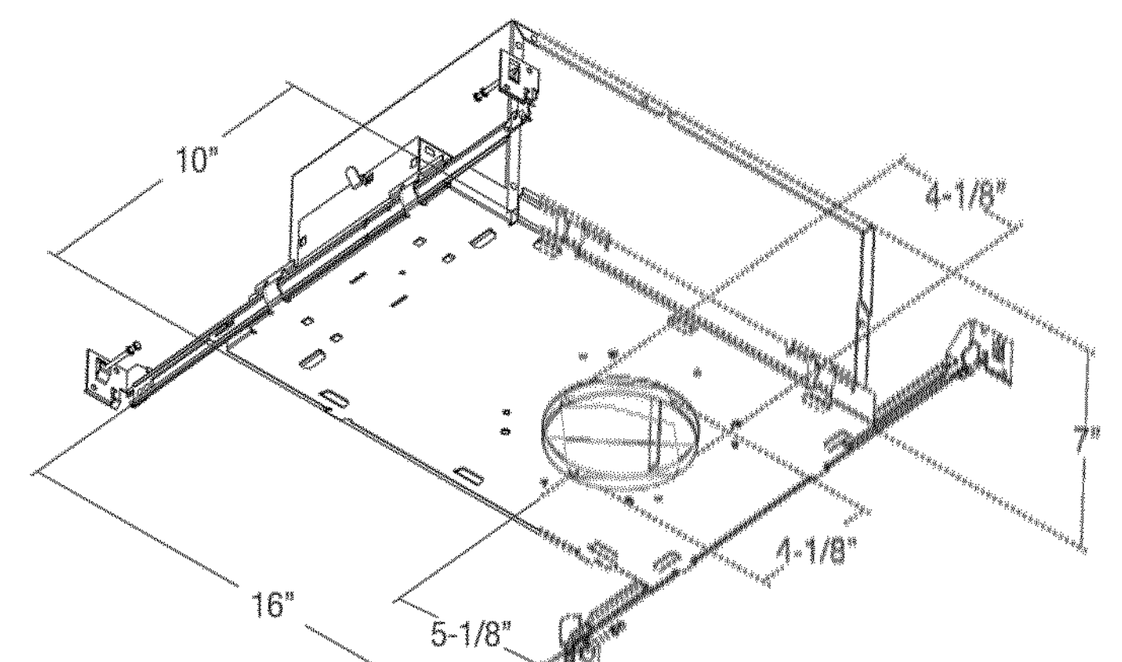


ROUND FLANGED | ROUND TRIMLESS | SQUARE FLANGED | SQUARE TRIMLESS

FEATURES

A small aperture, architectural LED downlight that delivers the ultimate in uncompromised quality and performance, with precise, glare-free illumination, and unmatched flexibility. With the use of a single universal housing, it utilizes a multitude of trims, field changeable optics, and is fully adjustable to any beam angle, up to 45 degrees, with a full 365-degree horizontal rotation. Whether it's high-end architectural, hospitality, commercial, residential, or retail, the ER3 provides the most innovative solution to any design application that requires a small aperture.

LUMENS	700, 900, 1200, 1500 (Custom lumen packages available)
CCT & DYNAMIC PLATFORMS	27K, 30K, 35K, 40K, 50K, Tunable White, Dims to Warm, RGB + White
CRI	90 : Standard, 98 : Optional
COLOR QUALITY	2 Step MacAdam Ellipse
DISTRIBUTIONS	SPD(Spot 15°),ND(Narrow 24°), MD(Medium 35°), MWD(Medium Wide 45°), WD(Wide 52°)
TRIM OPTIONS	Downlight, Lensed Downlight, Wall Wash, Adjustable Accent, and Pinhole , Square and Round Trim and Trim less Options
REFLECTOR COLORS	WH (White), CL (Chrome), SHZ (Satin Haze), BK (Black)
FLANGE COLORS	WH (White)
DIMMING	0-10V Flicker Free 1% Dimming Standard (DIM10), LUTH, LUTFTB, LUT2W, FI DO10.1, FI DODMX.1, FI DODALI.1, DIMTR
EMERGENCY	10W - Up to 1000L Output (Bodine BSL310) 20W - Up to 2000L Output (Bodine BSL20)
LIFETIME	L70 at 102,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES LM79-08, LM80 and TM-30, TM-21
CCEA OPTION	For CCEA approved ER3 Family, please contact Elite Lighting for more information.



NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
1200	1392	16 W
900	1037	12 W
700	881	10 W

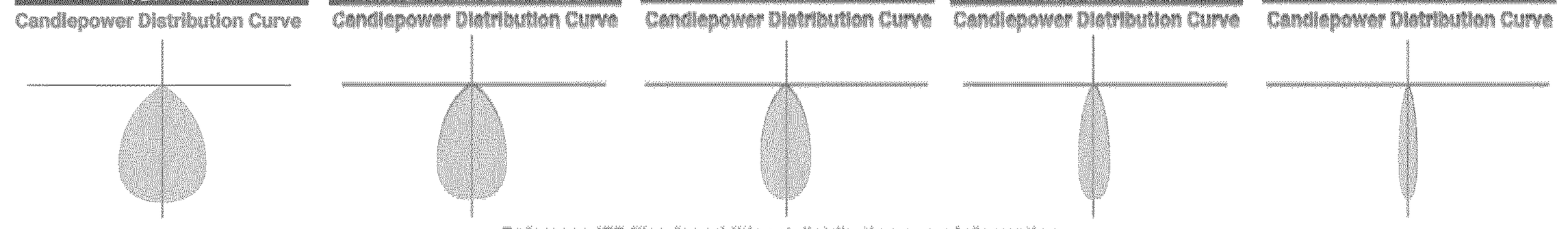
Based on 4000K, 90+ CRI. Actual wattage ma y vary +/- 5%

HIGH PERFORMANCE OPTIONS

NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
1500	1680	17 W
1200	1380	14 W

Based on 4000K, 90+ CRI. Actual wattage ma y vary +/- 5%

WD: WIDE Candlepower Distribution Curve | MWD: MEDIUM WIDE Candlepower Distribution Curve | MD: MEDIUM Candlepower Distribution Curve | ND: NARROW Candlepower Distribution Curve | SPD: SPOT Candlepower Distribution Curve



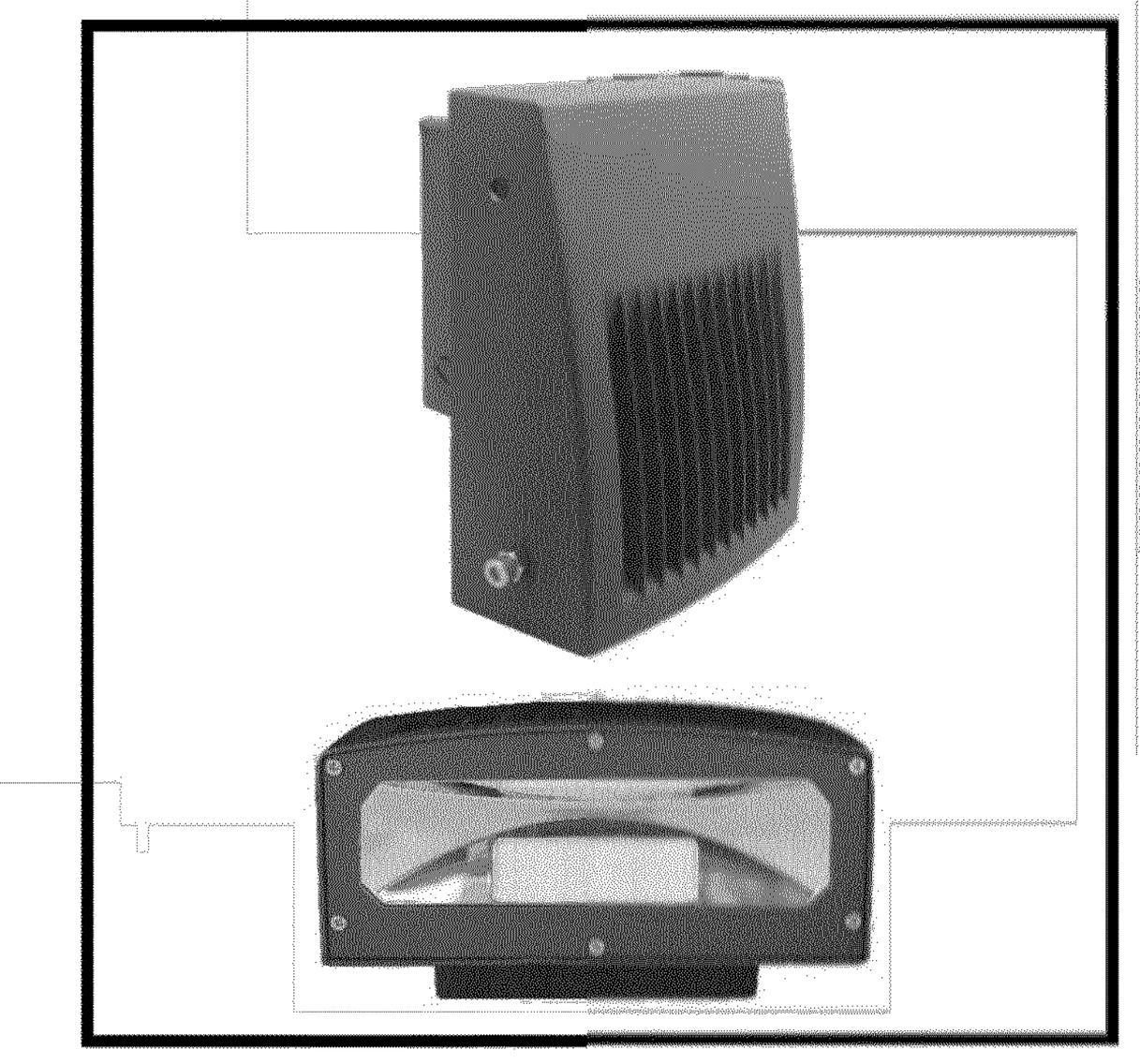
Reference IES files for additional distribution curve information.

elite LED LIGHTING | www.iuseelite.com | Due to the changes of constant improvement in LED technology, all details are subject to change without notice. Consult factory for up to date information. R8071519, R8071519

GENESIS Lighting Solutions

FIXTURE "FA"

LED Slim Wall Pack



FEATURES:
- Heavy Duty die-cast aluminum housing with anti-corrosion texture architectural baked polyester powder coating
- Tempered and impact resistant clear prismatic borosilicate glass
- No UV or IR radiation

ENERGY DATA
- Input Voltage: 120 - 277
- Power Factor: >0.90
- Power: 20W / 30W / 60W / 80W
- System Efficacy: (120Lm/W)
- Color Temperature: 5000K
- Lifetime Hours: 50000
- Operating Temperature: -13°F~ 131°F
- Color Rendering Index (CRI) : ≥80
- IP Rating: IP65

WARRANTY

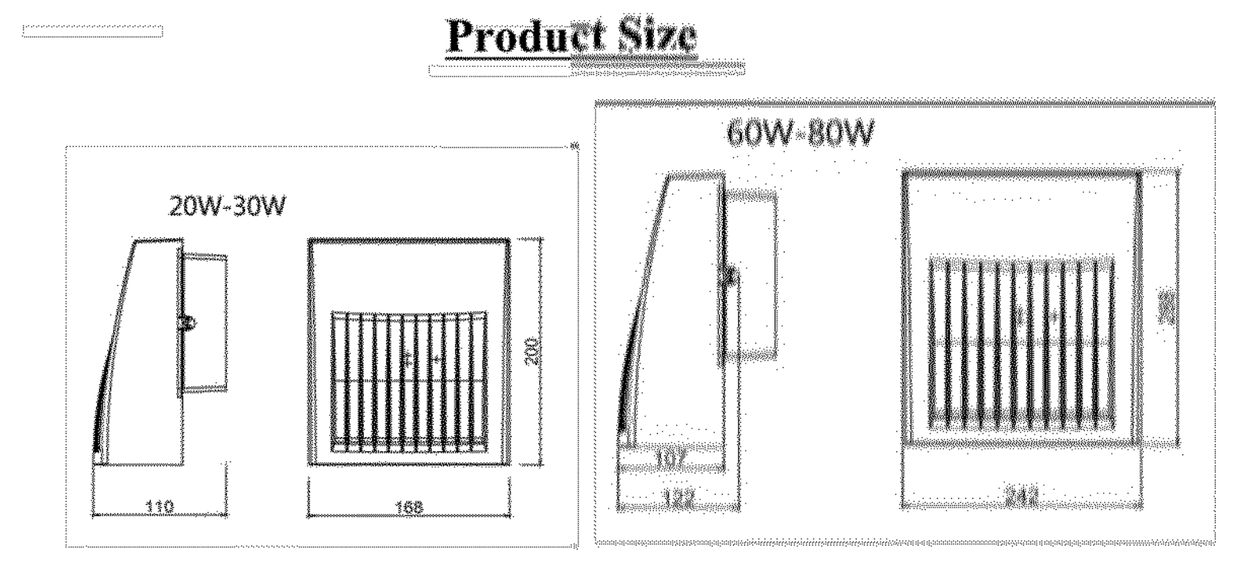
5 - year limited warranty.

Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values measure under laboratory conditions.

Ordering Information: Example: GLSWPSL60W5000

MODEL	WATTAGE	KELVIN	VOLTAGE	FINISH	OPTIONS
GLSWPSL	60W	5000	120/277	Bronze	
GLSWPSL	20W	3000	120/277v	Bronze	Photocell
	30W	4000			
	60W	5000			
	80W				

Product Size



APPLICATIONS:
- Shopping Centers
- Restaurants
- Offices & Schools
- Hospitals
- Hotels

CERTIFICATIONS:
- UL Listed
- DLC Certification Approved

DIMMABLE

LINEAR LIGHTING / LS2-M — AMERICAN LIGHTING

LIGHT STRING

Commercial Grade E26 Interconnectable Kits

PROJECT:	
TYPE:	FIXTURE "W"
LOCATION:	
CATALOG NUMBER:	

Commercial E26 Medium base stringers are perfect for any outdoor patio or lighting display. Commercial grade stringers are weather resistant and designed for long term usage. Includes guy-wire loop for additional support for large spans or spaces. E26 base sockets are perfect for any standard LED or incandescent bulbs giving you the creative freedom for your lighting display.

- Great decorative lighting product for patios, gazebos, building outlines, event tents, and retail walkways
- Factory-molded, formulated PVC sockets on heavy-duty wire form a tight weather resistant seal around bulbs
- Suitable for indoor and outdoor commercial applications
- E26 Medium base decorative bulbs sold separately
- cTUVus Listed



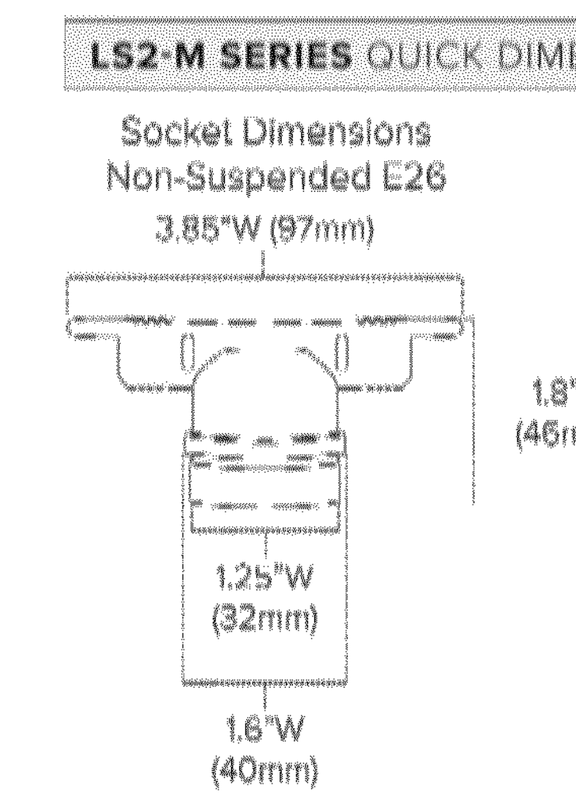
OUTDOOR RATED | RoHS COMPLIANT

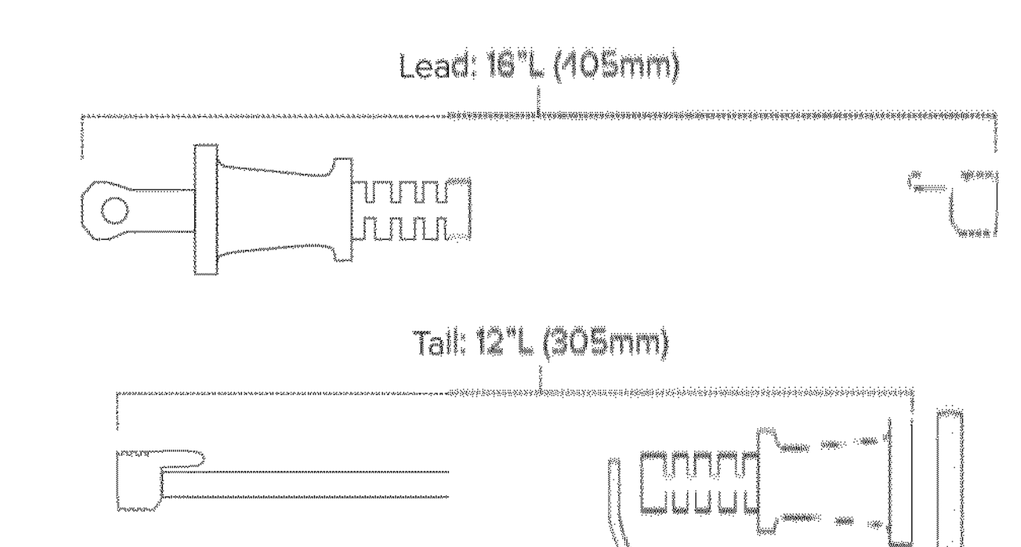
LS2-M SERIES QUICK SPECS

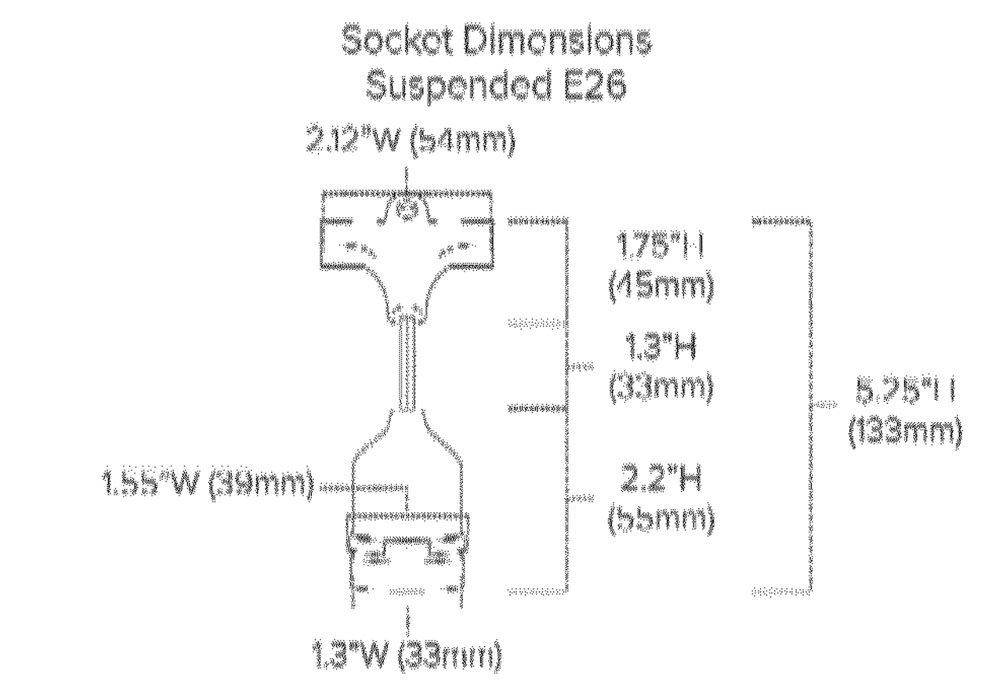
SERIES	LS2-M
INPUT VOLTAGE	120V AC
WATTAGE	25W per socket
MAX RUN	1200W
CABLE TYPE	14AWG SJTW 2-Wire
SOCKET TYPE	E26
SOCKET SPACING	24"
CUT INCREMENTS	Field cuttable (Must be properly sealed)
IP RATING	IP64 - Wet Location
RATING	cTUVus Listed

LS2 interconnect-able kits are cTUVus Listed to UL standard UL588 for wet location all year use, however safety rating is void if product is cut. Not intended for installation in ceilings, soffits, cabinets or other enclosed spaces.
Keep lamps at least 4.9m/16ft away from pools and spas.

LS2-M SERIES QUICK DIMENSIONS







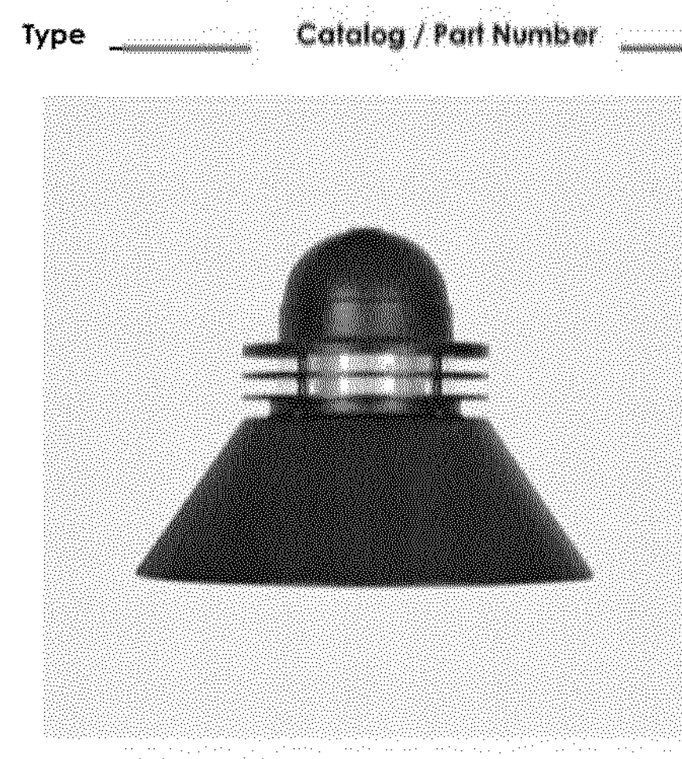
www.AmericanLighting.com | Sales@AmericanLighting.com | Denver, CO | 800.880.1180 | ©2022 American Lighting Inc. REV.2222

Specification Sheet — Gallery™ GL1960 Medium

FIXTURE "FB"

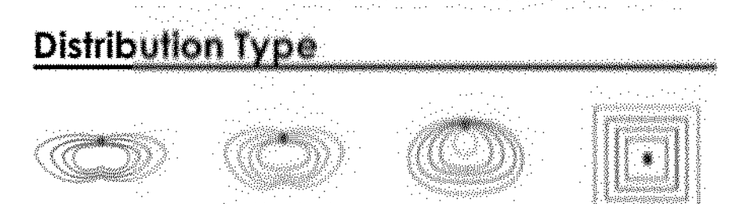
Project Name ______ Qty ______

Type ______ Catalog / Part Number ______



GL1960 - Medium Gallery II						
Shade	Straight Edge (S)	Flared Edge (F)	Bell Edge (B)	Round with Flared Rim (RF)	Round with Round Rim (RR)	Round with Square Rim (RS)
Diameter	17.9"	18"	19.5"	18.7"	18.4"	19.2"
Height	13.5"	12.6"	13.7"	14.8"	14.4"	14.1"

Distribution Type



Type 2 | Type 3 | Type 4 | Type 5

CCT - Color Temp (K)

2,700K | 3,000K | 3,500K | 4,000K | 5,000K

7 Year Warranty

IP Rating

IP 66

Certifications

c UL us LISTED

Description

The GL1960 Gallery™ series is a medium scale, decorative pendant luminaire with a cast aluminum driver housing and spun aluminum shades. The housing and shades is available in a variety of shapes and styles for any application.
EPA: .50 (ft²)
WEIGHT: 28 LBS

Features

Mounting Configuration	**TW:** Wall Mount (boxed) **2A:** 2 Arm Mount @ 180° **3A:** 3 Arms @ 120° **4A:** 4 Arms @ 90° **2AM:** 2 Arm Mid-Mount @180° **CAT:** Catenary	**1A:** 1 Arm Mount **2A90:** 2 Arm Mount @ 90° **3A90:** 3 Arms @ 90° **1AM:** 1 Arm Mid-Mount **SH44:** Stem Hung **CH44:** Chain Hung
Optional Control Receptacle	**R7:** 7-Pin control receptacle only	
Optional Control	**PE:** Twist-Lock Photocontrol (120V-277V) **PE4:** Twist-Lock Photocontrol (347V-480V) **SC:** Shorting Cap **PEC:** Electronic Button Photocontrol (120V-277V) **PEC4:** Electronic Button Photocontrol (480V)	
Optional Fuse	**FHD:** Double Fuse and Holder	
Optional Hangstraight	**HSHS:** Standard Horizontal Hangstraight, Spike Finial **HSHN:** Standard Horizontal Hangstraight, No Finial **HSHB:** Standard Horizontal Hangstraight, Ball Finial **EZ:** Vertical Hangstraight, Large, "EZ" Mount	
Optional House Side Shield	**HSS:** 120° House Side Shield **BLOC:** Back Light Optical Control	

Physical

Luminaire	Medium Gallery

Sternberg | 555 Lawrence Ave, Roselle, IL, 60172, US | T 847-588-3400 | contactus@sternberglighting.com | www.sternberglighting.com www.sternberglighting.com/products/32

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Specification Sheet — Gallery™ GL1960 Medium

FIXTURE "FB"

Shade Style	**S:** Straight Edge (boxed) **B:** Bell Edge **RF:** Round with Flared Rim	**F:** Flared Edge **RR:** Round with Round Rim **RS:** Round with Square Rim
Housing	**BFR:** Base Fixture Round **BFS:** Base Fixture Stepped **GRR:** Glow Rings Round **GRS:** Glow Rings Stepped **SRR:** Solid Rings Glow Top, Round **SRS:** Solid Rings Glow Top, Stepped **GWR:** Glow Window Round **GWS:** Glow Window Stepped **BSR:** Blank Top Solid Rings Round **BSS:** Blank Top Solid Rings Stepped (boxed)	
Lens	**CA:** Clear Acrylic **SA:** Sag Acrylic **SV1:** Flat Soft Vue Light Diffused Acrylic (boxed) **SV2:** Flat Soft Vue Moderate Diffused Acrylic **SV4:** Flat Soft Vue Maximum Diffused Acrylic **SV1SA:** Soft Vue Light Diffused Sag Acrylic **SV2SA:** Soft Vue Moderate Diffused Sag Acrylic **SV4SA:** Soft Vue Maximum Diffused Sag Acrylic	
Finish	**UGMT:** Urban Gun Metal Textured **UGM:** Urban Gun Metal Matte **UBT:** Urban Bronze Textured **UB:** Urban Bronze Matte **USLT:** Urban Silver Textured **USL:** Urban Silver Matte **UWHT:** Urban White Textured **UWH:** Urban White Matte **BKT:** Black Textured (boxed) **CM:** Custom Match	

Light Source

LED	**12L:** 12 LEDs (boxed) **24L:** 24 LEDs	**16L:** 16 LEDs
CCT - Color Temp (K)	**27:** 2,700K **35:** 3,500K **50:** 5,000K	**30:** 3,000K (boxed) **40:** 4,000K
Distribution Type	**T2:** Type 2 (boxed) **T4:** Type 4	**T3:** Type 3 **T5:** Type 5

Electrical and control

Driver	**MDL006:** 120V-277V, 60mA (boxed) **MDL008:** 120V-277V, 80mA **MDL010:** 120V-277V, 100mA **MDL012:** 120V-277V, 120mA **MDL014:** 120V-277V, 140mA	**MDH006:** 347V-480V, 60mA **MDH008:** 347V-480V, 80mA **MDH010:** 347V-480V, 100mA **MDH012:** 347V-480V, 120mA **MDH014:** 347V-480V, 140mA

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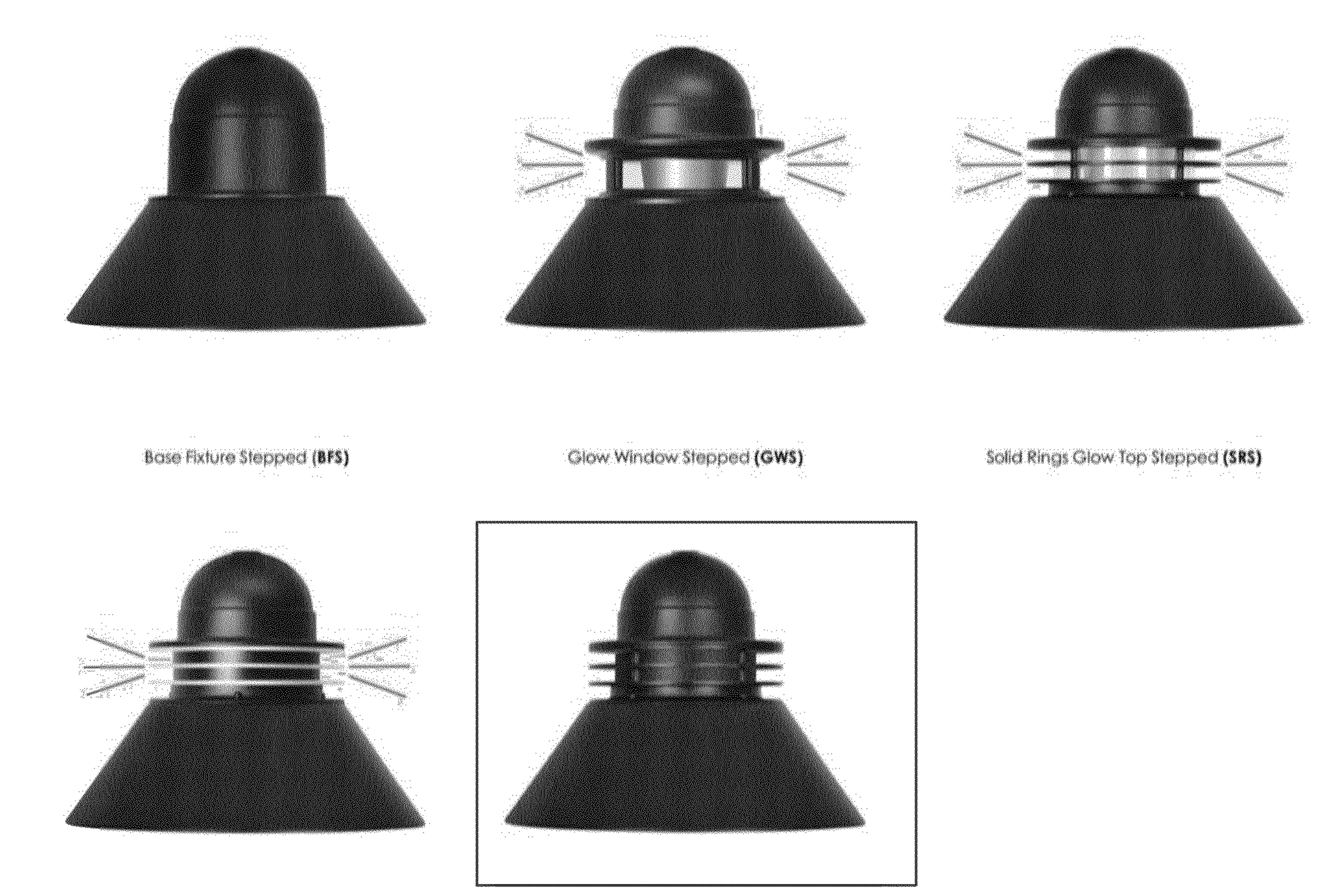
Specification Sheet — Gallery™ GL1960 Medium

FIXTURE "FB"

Stepped Housing with Straight Edge Shade



Base Fixture Stepped **(BFS)** | Glow Window Stepped **(GWS)** | Solid Rings Glow Top Stepped **(SRS)** | Glow Rings Stepped **(GRS)** | Blank Top Solid Rings Stepped **(BSS)**

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811 Know what's below. Call before you dig.

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No.	REVISION	BY	DATE

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VOICE: 720-881-1600

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

MCCASLIN & MARSHALL RD, SUPERIOR, CO

SITE LIGHTING FIXTURES

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	07/03/24

PH.2

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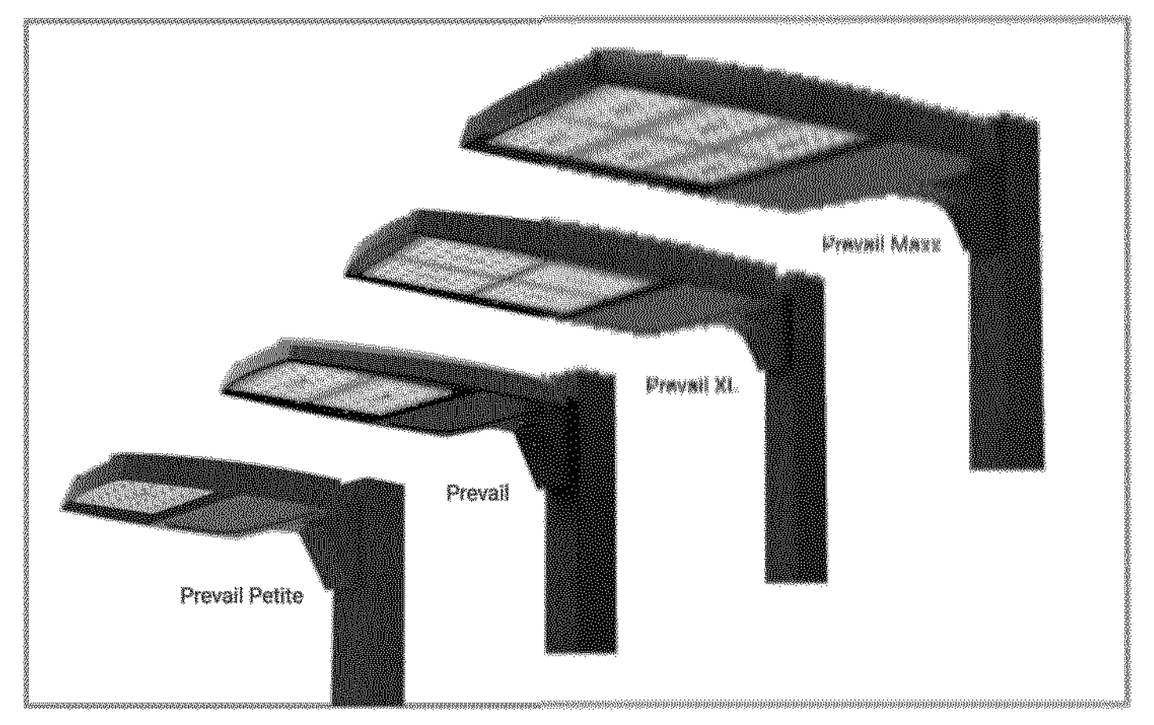
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

FIXTURE "SA3-HSS", "SA23" AND "SA5"

Project		Catalog #		Type	
Prepared by		Notes		Date	



Lumark

Prevail Discrete LED

Area / Site Luminaire

Product Features

LumenSafe Technology · BAA

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3, 4
- Optical Configurations page 5
- Product Specifications page 5
- Energy and Performance Data page 6, 7
- Control Options page 8

Product Certifications

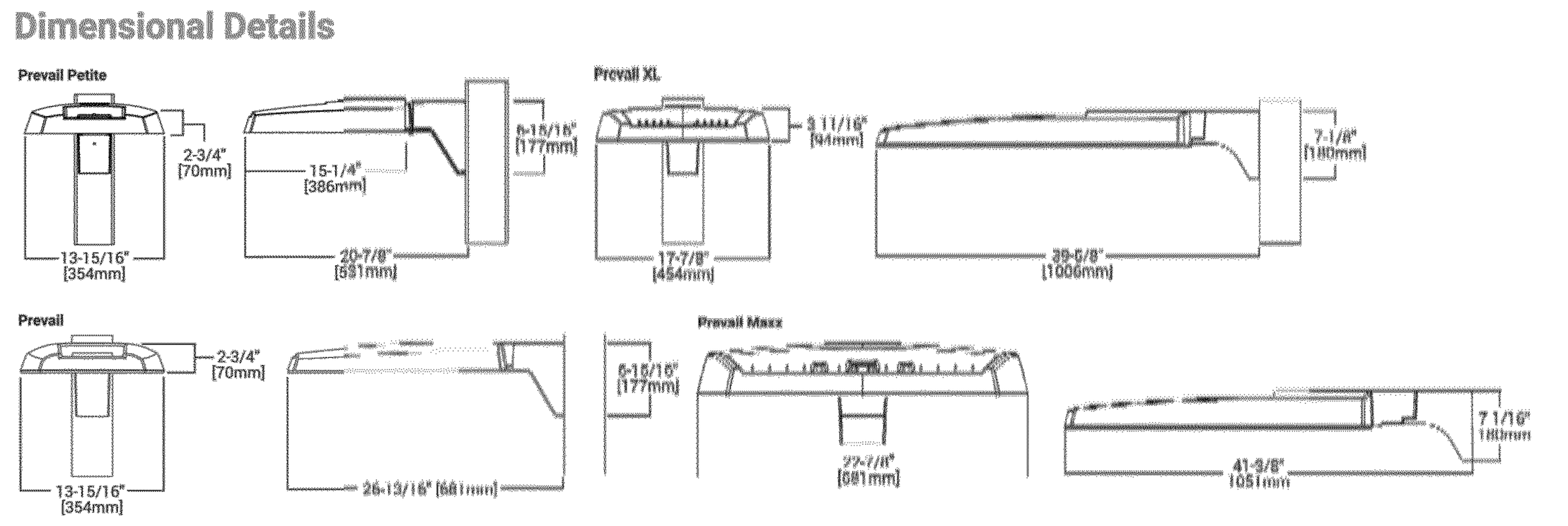
Quick Facts

- Direct-mounted discrete light engine for improved optical uniformity and visual comfort
- Lumen packages range from 4,300 - 68,000 nominal lumens (30W - 550W)
- Replaces 70W up to 1,000W HID equivalents
- Efficacies up to 157 lumens per watt
- Standard universal quick mount arm with universal drill pattern

Connected Systems

- WaveLinx

Dimensional Details



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

COOPER Lighting Solutions

PS500005LN page 1
June 20, 2023 8:23 PM

FIXTURE "SA3", "SA3-HSS", "SA23" AND "SA5"

Lumark — Prevail Discrete LED

Ordering Information

SAMPLE NUMBER: PRV-XL-PA4B-740-U-T4W-BZ

Product Family [1, 2]	Light Engine: Configuration	Light Engine: Drive Current [4]	Color Temperature	Voltage	Distribution	Mounting (Included)	Finish
PRV-P=Prevail Petite BAA-PRV-P=Prevail Petite BAA Buy American Act Compliant [3] TAA-PRV-P=Prevail Petite TAA Trade Agreements Act Compliant [3]	PA1=1 Panel, 24 LED Rectangle	A=400mA Nominal B=700mA Nominal C=950mA Nominal D=1200mA Nominal	740=70CRI, 4000K 730=70CRI, 3000K 750=70CRI, 5000K 8540=85CRI, 4000K	U=Universal, 120-277V H=High Voltage, 347-480V 1=120V 2=208V 3=240V 4=277V 8=480V [5] 9=347V DV=DuraVolt, 277-480V [5, 6]	T2R=Type II Roadway T2U=Type II Urban T3=Type III T4W=Type IV Wide 5WQ=Type V Square Wide	SA=QM Standard Versatile Arm MA=QM Mast Arm FMA=Fixed Mast Arm [30] WM=QM Wall Mount Arm ADJA-WM= Adjustable Arm – Wall Mount [30] ADJA=Adjustable Arm – Pole Mount [30] ADJS=Adjustable Arm Slipfitter, 3" vertical tenon [30] SP2=Adjustable Arm – Slipfitter, 2 3/8" vertical tenon [28, 30]	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
PRV=Prevail BAA-PRV=Prevail BAA Buy American Act Compliant [3] TAA-PRV=Prevail TAA Trade Agreements Act Compliant [3]	PA1=1 Panel, 24 LED Rectangle PA2=2 Panels, 48 LED Rectangles	A=700mA Nominal B=950mA Nominal					
PRV-XL=PRV XL BAA-PRV-XL=Prevail XL BAA Buy American Act Compliant [3] TAA-PRV-XL=Prevail XL TAA Trade Agreements Act Compliant [3]	PA3=3 Panels, 72 LED Rectangles PA4=4 Panels, 96 LED Rectangles	A=750mA Nominal B=950mA Nominal					
PRV-M=Prevail Maxx BAA-PRV-M=Prevail Maxx BAA Buy American Act Compliant [3] TAA-PRV-M=Prevail Maxx TAA Trade Agreements Act Compliant [3]	PA6=6 Panels, 144 LED Rectangles	A=600mA Nominal B=800mA Nominal C=1000mA Nominal D=1200mA Nominal					

Options (Add as Suffix)

10K=10kV UL 1449 Fused Surge Protective Device
20MSP=20kV MOV Surge Protective Device
20K=20kV UL 1449 Fused Surge Protective Device
F=Single Fuse (Used with Voltages 120, 277 or 347V)
FF=Double Fuse (Used with Voltages 208, 240 or 480V)
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
CC=Coastal Construction finish [31]
HSS=House Side Shield (Factory Installed) [7]
HA=50°C High Ambient Temperature [8]
PR=NEMA 3-PIN Twistlock Photocontrol Receptacle [10]
PR7=NEMA 7-PIN Twistlock Photocontrol Receptacle [10]
MS/DIM-L08=Motion Sensor for Dimming Operation, Up to 8' Mounting Height [11, 12, 13, 22]
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [11, 12, 13, 28, 29]
MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [11, 12, 13]
SPB1=Motion Sensor for Dimming Operation, BLE Interface, Up to 8' Mounting Height [11, 14, 22]
SPB2=Motion Sensor for Dimming Operation, BLE Interface, 8' - 20' Mounting Height [11, 14, 28, 29]
SPB4=Motion Sensor for Dimming Operation, BLE Interface, 21' - 40' Mounting Height [11, 14, 29]
ZW=Wavelinx-enabled 4-PIN Twistlock Receptacle [11, 17]
ZD=DALI-enabled 4-PIN Twistlock Receptacle [11, 17]
ZW-SWPD4XX=Wavelinx Pro, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting Height [11, 15, 16, 17, 22]
ZW-SWPD5XX=Wavelinx Pro, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting Height [11, 15, 16, 17, 28, 29]
ZD-SWPD4XX=Wavelinx Pro, SR Driver, Dimming Motion and Daylight, 7' - 15' Mounting Height [11, 15, 16, 17, 22]
ZD-SWPD5XX=Wavelinx Pro, SR Driver, Dimming Motion and Daylight, 15' - 40' Mounting Height [11, 15, 16, 17, 28, 29]
(See Table Below)=LumenSafe Integrated Network Security Camera [18, 19]

Accessories (Order Separately) [20, 21]

PRVSA-XX=Standard Arm Mounting Kit [22]
PRVMA-XX=Mast Arm Mounting Kit [22]
PRVWM-XX=Wall Mount Kit [22]
PRV-ADJA-XX=Adjustable Arm - Pole Mount Kit [22]
PRV-ADJS-XX=Adjustable Arm - Slipfitter Kit [22]
PRV-ADJA-WM-XX=Adjustable Arm - Wall Mount Kit [22]
PRVXLSA-XX=Standard Arm Mounting Kit [23]
PRVXLMA-XX=Mast Arm Mounting Kit [23]
PRVXLWM-XX=Wall Mount Kit [23]
PRV-XL-ADJA-XX=Adjustable Arm - Pole Mount Kit [23]
PRV-XL-ADJA-WM-XX= Adjustable Arm - Wall Mount Kit [23]
PRV-XL-ADJS-XX= Adjustable Arm - Slipfitter Kit [23]
PRV-M-ADJA-XX=Adjustable Arm - Pole Mount Kit [23]
PRV-M-ADJS-XX=Adjustable Arm - Slipfitter Kit [23]
PRV-M-ADJA-WM-XX=Adjustable Arm - Wall Mount Kit [23]
MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1011-XX=2@180°Tenon Adapter for 3-1/2" O.D. Tenon
MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
SRA238=Tenon Adapter from 3" to 2-3/8"
PRV/DIS-FDV=Full Drop Visor [22]
PRVXL/DIS-FDV=Full Drop Visor [23]
HSS-VP=House Side Shield Kit, Vertical Panel [7, 24]
HSS-HP=House Side Shield Kit, Horizontal Panel [7, 24]
VGS-ARCH= Panel Drop Shield, Short
VGL-ARCH= Panel Drop Shield, Long
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=NEMA Photocontrol - 120V
OA/RA1016=NEMA Photocontrol - Multi-Tap 105-285V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1027=NEMA Photocontrol - 480V
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [25]
WOLC-7P-10A=WaveLinx Outdoor Control Module (7-PIN) [27]
SWPD4-XX=WaveLinx Wireless Sensor, 7' - 15' Mounting Height [15, 16, 17, 22, 26]
SWPD5-XX=WaveLinx Wireless Sensor, 15' - 40' Mounting Height [15, 16, 17, 28, 29]

NOTES:
1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for applications. Refer to installation instructions and pole white paper WP513001EN for additional support information.
3. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
4. Nominal drive currents shown here. For actual drive current by configuration, refer to Power and Lumens tables.
5. 480V not to be used with ungrounded or impedance grounded systems.
6. DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
7. House Side Shield not for use with 5WQ distribution.
8. Not available with PA1D light engine in Petite housing (PRV-P).
9. Coastal construction finish salt spray tested to over 5,000 hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
10. If High Voltage (H) or DuraVolt (DV) is specified, use a photocontrol that matches the input voltage used.
11. Controls system is not available in combination with a photocontrol receptacle (PR or PR7) or another controls system (MS, SPB, ZD, or ZW).
12. Option not available with High Voltage (H) or DuraVolt (DV). Must specify Universal (U), 347V (9), or 480V (8) voltage.
13. Utilizes the Wattstopper sensor FSP-211. Sensor color white unless specified otherwise via PDR. To field configure, order FSIR-100 accessory separately.
14. Utilizes the Wattstopper sensor FSP-3XX series. Sensor color determined by product finish. See Sensor Color Reference Table. Field-configures via mobile application. See Controls section for details.
15. Sensor passive infrared (PIR) may be overly sensitive when operating below -20°C (-4°F).
16. In order for the device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more Wavelinx application information.
17. Replace XX with sensor color (WH, BZ or BK).
18. Only available in PRV-XL configurations.
19. Not available with High Voltage (H, DV, 8 or 9) or HA options. Consult LumenSafe system product pages for additional details and compatibility information.
20. Replace XX with paint color.
21. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
22. Not for use with PRV-XL or PRV-M configurations.
23. Only for use with PRV. Not applicable to PRV-M, PRV-XL, or PRV-P.
24. Must order one per optic/LED when ordering as a field-installable accessory (1, 2, 3, 4, or 6). Refer to House Side Shield reference table for details.
25. This tool enables adjustment to Motion Sensor (MS) parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
26. Requires 4-PIN twistlock receptacle option (ZD or ZW) option.
27. Requires 7-PIN NEMA twistlock photocontrol receptacle (PR7) option. The WOLC 7 cannot be used in conjunction with other controls systems (MS, ZD, ZW or LWR). Only for use at 120-347V.
28. Only available for PRV-M configurations.
29. Only for use with PRV-XL.
30. Fixed for PRV-M

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul	
L=LumenSafe Technology	H=Dome Camera, High Res Z=Dome Camera, Remote PTZ	C=Cellular, Customer Installed SIM Card A=Cellular, Factory Installed AT&T SIM Card V=Cellular, Factory Installed Verizon SIM Card	S=Cellular, Factory Installed Sprint SIM Card E=Ethernet Networking

COOPER Lighting Solutions

PS500005LN page 2
June 20, 2023 8:23 PM

FIXTURE "SB"

Streetworks

DESCRIPTION

The EPIC Collection delivers custom luminaire flexibility with high quality, yet availability expectations of standard specification grade product. The EPIC Collection can be dressed to suit any application. Recognizing evolving environmental and legislative trends, the EPIC Collection delivers world class LED optical and performance solutions to the decorative luminaire marketplace.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

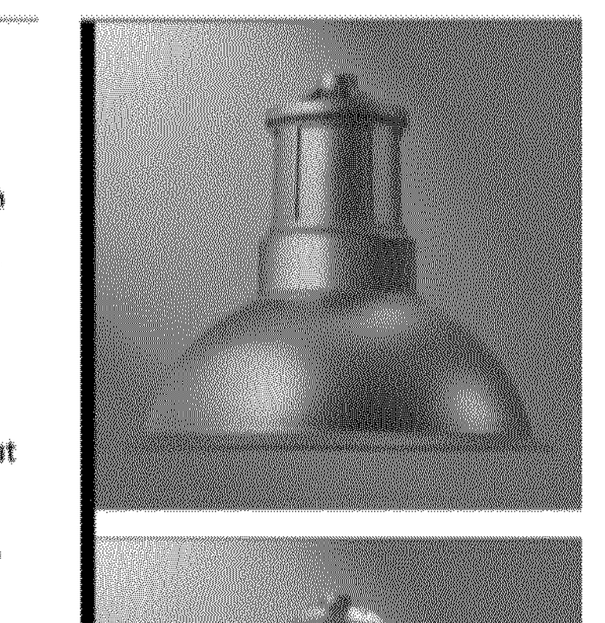
Construction
TOP: Cast aluminum top housing attaches to cast aluminum mounting arm hub with four stainless steel fasteners. One-piece silicone gasket between mounting hub and top casting seals out moisture and contaminants. (See the mounting accessories section for a full selection of mounting arms. (Only these arms are compatible with the Epic luminaire). MIDSECTION: Continuous silicone gaskets seal lens to top casting and shade. The mid section features cast aluminum construction and stainless steel assembly. SHADES: Heavy gauge precision spun aluminum shades offer superior surface finish and consistency in form. DOORFRAME: Die-cast aluminum 1/8" thick door and doorframe seal to underside of shade with a thick wall continuous silicone gasket. Mounting hub ships attached to mounting arm.

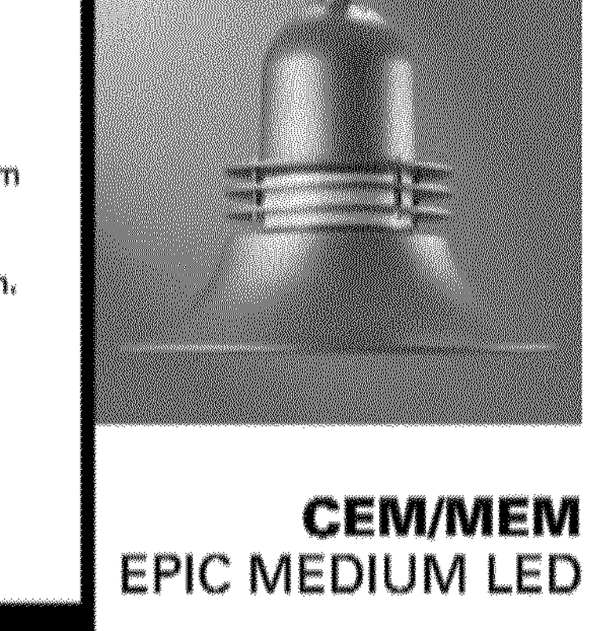
Optics
Choice of twelve patented, high-efficiency AccuLED Optic™ technology manufactured from injection-molded acrylic. Optics are precisely designed to shape the optics, maximizing efficiency and application spacing. AccuLED Optic technology, creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and nominal 70 CRI. Optional 3000K CCT and 5000K CC. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical
LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation, greater than 0.9 power factor, less that 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Finish
Housing is finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR™ cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection. Options to meet Buy American and other domestic preference requirements.

Warranty
Five-year warranty.





CEM/MEM
EPIC MEDIUM LED

1 - 4 LightBARs
Solid State LED

DECORATIVE AREA LUMINAIRE

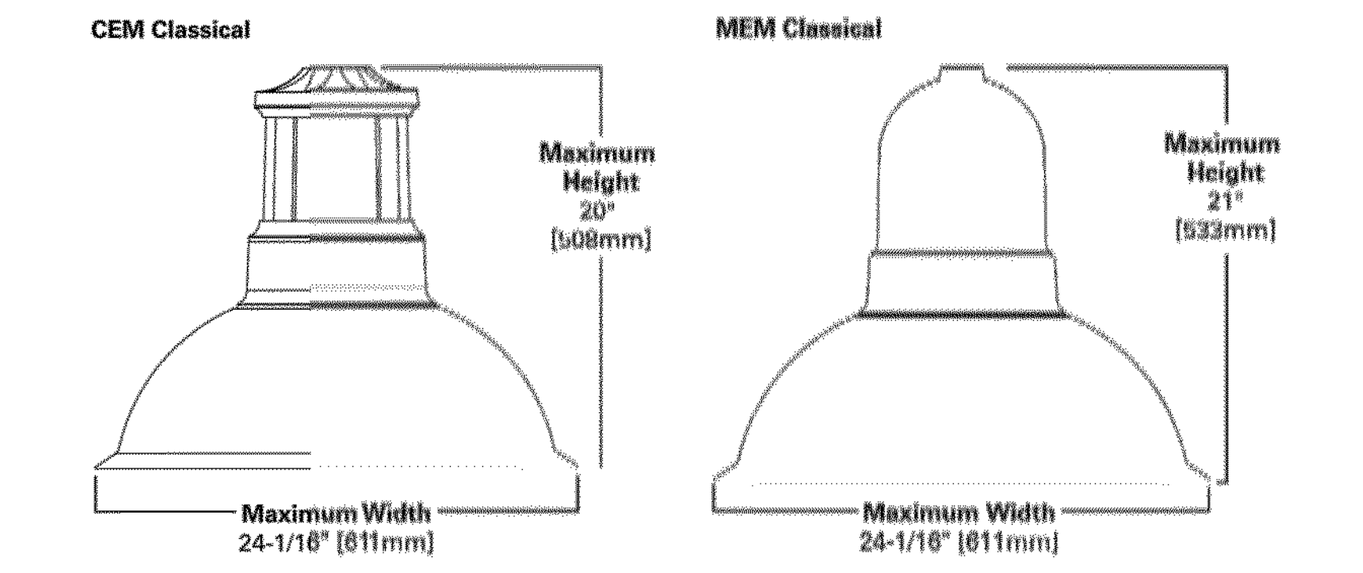
CERTIFICATION DATA
UL/cUL Listed
IP66 LightBARs
LM79 / LM80 Compliant
2G Vibration Tested
ISO 9001

ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V 50/60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating

EPA
Effective Projected Area: (Sq. Ft.) 0.94

SHIPPING DATA
Approximate Net Weight:
45 lbs. [20 kgs.]

DIMENSIONS



See configurations for more detailed information.

COOPER Lighting Solutions

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page 4 — **CEM/MEM** EPIC MEDIUM LED

ORDERING INFORMATION

Sample Number: CEM-E04-LED-E1-T2-FL-GM

Product Family [1]	Number of LightBARs [2, 3]	Lamp Type	Voltage	Distribution	Mid Section Type	Shade Type	Color [5]
CEM=Epic Classical Medium MEM=Epic Modern Medium BAA-CEM= Epic Classical Medium, Buy American Act Compliant [19] TAA-CEM= Epic Classical Medium, Trade Agreements Act Compliant [19] BAA-MEM= Epic Modern Medium, Buy American Act Compliant [19] TAA-MEM= Epic Modern Medium, Trade Agreements Act Compliant [19]	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs	LED=Solid State Light Emitting Diodes	E1=Electronic (120-277V) 347=347V 480=480V [4]	T2=Type II T3=Type III T4=Type IV SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide RW=Rectangular Wide SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	SO=Solid SR=Solid Rings	SN=Straight Narrow SW=Straight Wide BL=Bell FL=Flute	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic GN=Hartford Green WH=White

Options (Add as Suffix)

2L=Two Circuits [6]
7030=70 CRI / 3000K CCT [7]
7050=70 CRI / 5000K CCT [7]
8030=80 CRI / 3000K CCT [7]
LCF=LightBAR Cover Plate Matches Housing Finish
MS-LXX=Motion Sensor for ON/OFF Operation [8]
MS/X-LXX=Motion Sensor for Bi-Level Switching [9]
PMXX=Pendant Mount (XX=Pendant Length in Inches, 9.5" min - 48.0" max) [10]
HSS=Factory Installed House Side Shield [11]
DIM=0-10V Dimming Driver [12]
10MSP=Parallel 10kV MOV Surge Protective Device
20MSP=Parallel 20kV MOV Surge Protective Device
20K=Series 20kV UL 1449 Surge Protective Device

Accessories (Order Separately) [13, 20]

OA/RA1016=NEMA Twistlock Photocontrol - Multi-Tap
OA/RA1027=NEMA Twistlock Photocontrol - 480V
OA/RA1201=NEMA Twistlock Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
LB/HSS-21=Field Installed House Side Shield for "E" LightBARs [11, 15]
LB/HSS-07=Field Installed House Side Shield for "F" LightBARs [11, 15]

Mounting Accessories (Order Separately)
Classical
SA6150-XX=Bishop Wall Mount Arm
SA6151-XX=Bishop Wall Mount Arm with Cross Rod
SA6152-XX=Traditional Wall Mount Arm
SA6153-XX=Traditional Wall Mount Arm with 45° Strap
SA6154-XX=Bishop Single Pole Mount Arm
SA6155-XX=Bishop Single Pole Mount Arm with Cross Rod
SA6156-XX=Bishop Twin Pole Mount Arm
SA6157-XX=Bishop Twin Pole Mount Arm with Cross Rods
SA6158-XX=Traditional Single Pole Mount Arm
SA6159-XX=Traditional Single Pole Mount Arm with Rounded Upper Bar
SA6160-XX=Traditional Single Pole Mount Arm with Rounded Lower Bar [14]
SA6161-XX=Traditional Single Pole Mount Arm with 45° Upper Bar
SA6162-XX=Traditional Single Pole Mount Arm with 45° Lower Bar [14]
SA6163-XX=Traditional Single Pole Mount Arm with 45° Upper Strap
SA6165-XX=Traditional Twin Pole Mount Arm
SA6166-XX=Traditional Twin Pole Mount Arm with Rounded Upper Bars
SA6167-XX=Traditional Twin Pole Mount Arm with Rounded Lower Bars [14]
SA6168-XX=Traditional Twin Pole Mount Arm with 45° Upper Bars
SA6169-XX=Traditional Twin Pole Mount Arm with 45° Lower Bars [14]
SA6170-XX=Traditional Twin Pole Mount Arm with 45° Upper Straps
SA6171-XX=Mast Arm Adapter
Modern
SA6101-XX=Bishop Wall Mount Arm
SA6102-XX=Bishop Wall Mount Arm with Cross Rod
SA6103-XX=Traditional Wall Mount Arm
SA6104-XX=Traditional Wall Mount Arm with 45° Strap
SA6105-XX=Bishop Single Pole Mount Arm
SA6106-XX=Bishop Single Pole Mount Arm with Cross Rod
SA6107-XX=Bishop Twin Pole Mount Arm
SA6108-XX=Bishop Twin Pole Mount Arm with Cross Rods
SA6109-XX=Traditional Single Pole Mount Arm
SA6110-XX=Traditional Single Pole Mount Arm with Rounded Upper Bar
SA6111-XX=Traditional Single Pole Mount Arm with Rounded Lower Bar [14]
SA6112-XX=Traditional Single Pole Mount Arm with 45° Upper Bar
SA6113-XX=Traditional Single Pole Mount Arm with 45° Lower Bar [14]
SA6114-XX=Traditional Single Pole Mount Arm with 45° Upper Strap
SA6116-XX=Traditional Twin Pole Mount Arm
SA6117-XX=Traditional Twin Pole Mount Arm with Rounded Upper Bars
SA6118-XX=Traditional Twin Pole Mount Arm with Rounded Lower Bars [14]
SA6119-XX=Traditional Twin Pole Mount Arm with 45° Upper Bars
SA6120-XX=Traditional Twin Pole Mount Arm with 45° Lower Bars [14]
SA6121-XX=Traditional Twin Pole Mount Arm with 45° Upper Straps
SA6122-XX=Mast Arm Adapter

Accessory Options [16]
V=Victorian Finial [17]
M=Modern Finial [17]
A=Architectural Finial [17]
N=Nostalgic Finial [17]
R=NEMA Twistlock Photocontrol Receptacle [18]
PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle [18]

NOTES:
1. Arm not included. Order separately. See accessories.
2. Standard 4000K CCT and greater than 70 RI.
3. 21 LED LightBAR powered by 350mA and 7 LED LightBAR powered by 1A.
4. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
5. Custom and RAL color matching available upon request. Consult your lighting representative at Cooper Lighting Solutions for more information.
6. Low-level output varies by bar count. Consult factory. Requires quantity of two or more LightBARs.
7. Consult customer service for lead times and multiplier.
8. Sensor mounted to the luminaire. Available in E01-E04 and F01-F04 configurations. Replace "XX" with mounting height in feet for proper lens selection, (e.g., MS-L20). Consult factory for additional information.
9. Sensor mounted to the luminaire. Available in E02-E04 and F02-F04 configurations. Replace "X" with number of LightBARs operating in low output mode and replace XX with mounting height in feet for proper lens selection, (e.g., MS/3-L25). Maximum four bars in low output mode. Consult factory for additional information.
10. Pendant mount option "PMXX" must be used with Invue Pendant mount kit only. Includes pendant pipe, swivel hanger and canopy cover. Other pendant lengths can be specified in inches (XX). Minimum pendant length is 9-1/2". For lengths above 48", consult your lighting representative at Cooper Lighting Solutions for more information.
11. Only for use with SL2, SL3 and SL4 distributions.
12. Dimming leads provide for external 0-10V control system (by others).
13. Replace XX with color suffix.
14. Only available with traditional arms.
15. One required for each LightBAR.
16. Add as suffix to mounting accessory. Example: VA6100-BK-R.
17. Not available with finials, pendant mount "PM48" or bishop wall mounts.
18. Requires use of 4" O.D. round straight pole.
19. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
20. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

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CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

D:\RGEC DROPBOX\JOBS\JOBS\2024\EVERHOME SUITES SUPERIOR CO\SITE PHOTOMETRICS\PH-1.DWG

No.	REVISION	BY	DATE

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1@rchitecture
ARCHITECTURE - PLANNING - INTERIORS
8400 E. CRESENT PARKWAY, SUITE 160
GREENWOOD VILLAGE, CO 80111
VOICE: 720-881-1600

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
SITE LIGHTING FIXTURES

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	07/03/24

PH.3

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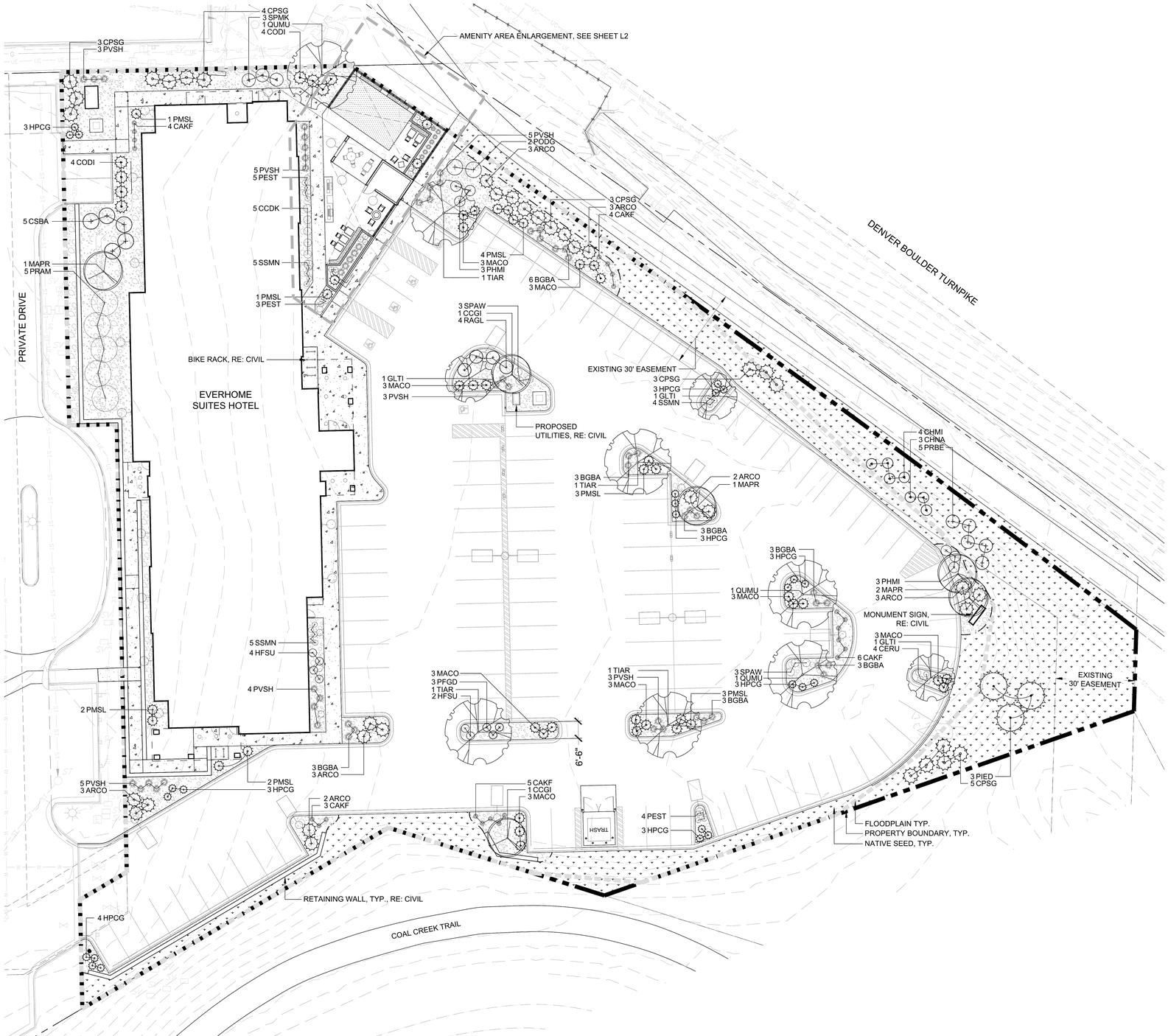
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

LEGEND

- DECIDUOUS TREE
- EVERGREEN TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- ORNAMENTAL GRASSES
- PERENNIALS
- NATIVE SEED
- ARTIFICIAL TURF
- 1-1/2" GRAY GRANITE MULCH
- SHREDDED WOOD MULCH
- PROPERTY BOUNDARY
- FLOODPLAIN
- LANDSCAPE EDGER
- STRING LIGHTING
- 4' ORNAMENTAL FENCING
- PARKING LIGHTING, RE: PHOTOMETRIC PLAN
- POLE LIGHTING, RE: PHOTOMETRIC PLAN
- BUILDING LIGHTING, RE: PHOTOMETRIC PLAN
- LOUNGE CHAIR
- DINING TABLE & CHAIRS
- SEAT BENCH
- OUTDOOR GRILL
- ROUND FIRE PIT
- SCREEN WALL WITH FENCE
- RAISED PLANTER WALL



1 LANDSCAPE PLAN

NORTH

0 20 40 60 feet

SCALE: 1" = 20'

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No.	REVISION	BY	DATE
1	REVISIONS PER COMMENTS	NR	04/22/24
2	REVISIONS PER COMMENTS	LR	06/07/24
3	REVISIONS PER COMMENTS	LR	07/03/24

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K2 CIVIL CONSULTANTS

VALERIAN
Landscape Architecture | Urban Design
Irrigation Design | Planning
970 Yuma Street | Suite 130 | Denver, CO 80204

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

MCCASLIN & MARSHALL RD, SUPERIOR, CO

LANDSCAPE PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	LR
DRAWN BY:	LR
DATE:	4/19/24

L1

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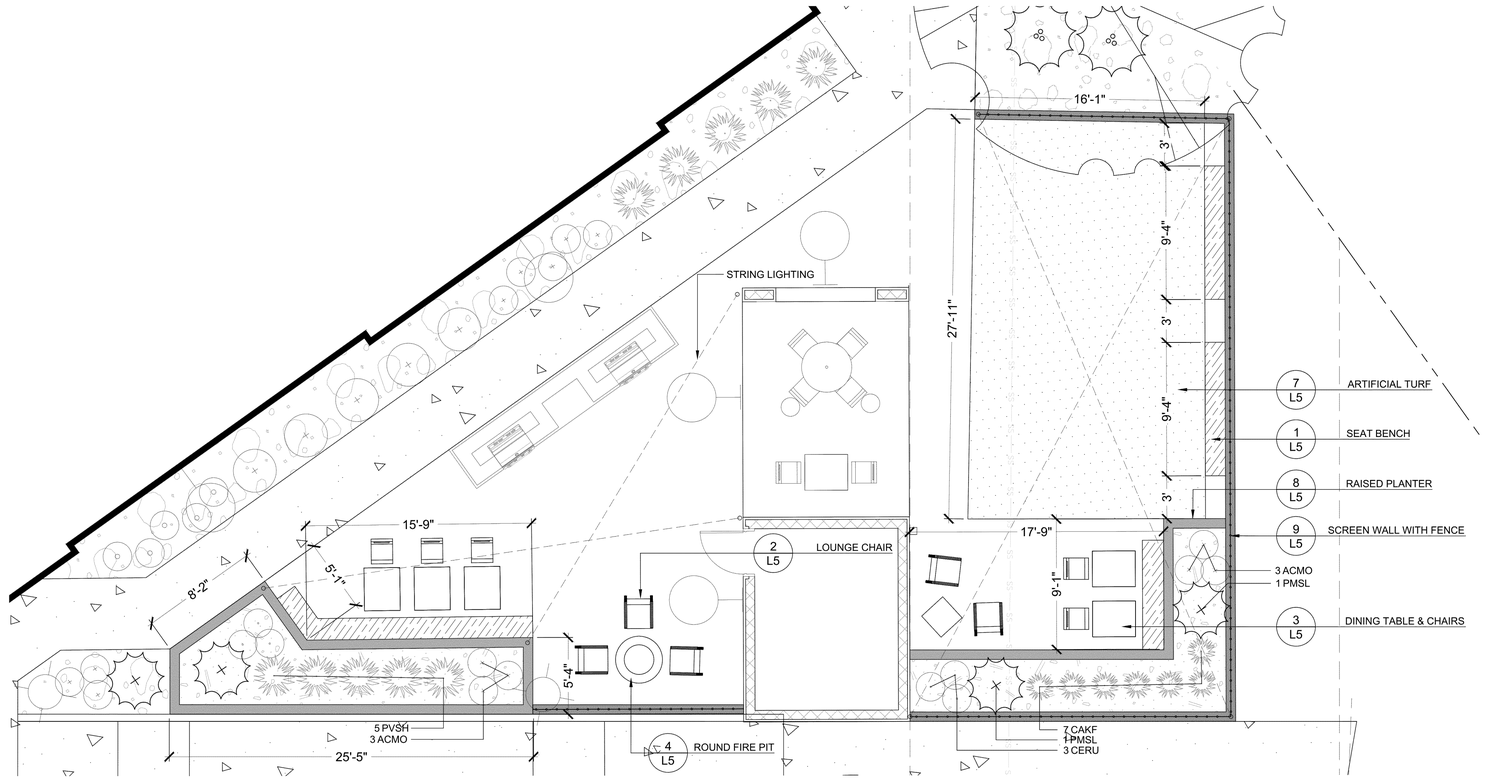
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

LEGEND

- DECIDUOUS TREE
- EVERGREEN TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- ORNAMENTAL GRASSES
- PERENNIALS
- NATIVE SEED
- ARTIFICIAL TURF
- 1-1/2" GRAY GRANITE MULCH
- SHREDDED WOOD MULCH
- PROPERTY BOUNDARY
- FLOODPLAIN
- LANDSCAPE EDGER
- STRING LIGHTING
- 4' ORNAMENTAL FENCING
- PARKING LIGHTING, RE: PHOTOMETRIC PLAN
- POLE LIGHTING, RE: PHOTOMETRIC PLAN
- BUILDING LIGHTING, RE: PHOTOMETRIC PLAN
- LOUNGE CHAIR
- DINING TABLE & CHAIRS
- SEAT BENCH
- OUTDOOR GRILL
- ROUND FIRE PIT
- SCREEN WALL WITH FENCE
- RAISED PLANTER WALL



1 AMENITY AREA ENLARGEMENT

NORTH

0 5 10 15 feet

SCALE: 1" = 5'

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No.	REVISION	BY	DATE
1	REVISIONS PER COMMENTS	NR	04/22/24
2	REVISIONS PER COMMENTS	LR	06/07/24
3	REVISIONS PER COMMENTS	LR	07/03/24

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

AMENITY AREA ENLARGEMENT

PROJECT NO:	KTD005.01
DESIGNED BY:	LR
DRAWN BY:	LR
DATE:	4/19/24

L2

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL
DECIDUOUS TREES					
GLTI	3	GLEDITSIA TRIACANTHOS INERMIS `SUNBURST`	SUNBURST HONEYLOCUST	B & B	2.5"CAL
QUMU	3	QUERCUS MUEHLENBERGII	CHINKAPIN OAK	B & B	2.5"CAL
TIAR	4	TILIA AMERICANA `REDMOND`	REDMOND LINDEN	B & B	2.5"CAL
EVERGREEN TREES					
PIED	3	PINUS EDULIS	PINYON PINE	B & B	10' HT.
ORNAMENTAL TREES					
CCGI	2	CRATAEGUS CRUS-GALLI INERMIS	THORNLESS COCKSPUR HAWTHORN	B & B	2"CAL
MAPR	4	MALUS X `PRAIRIFIRE`	PRAIRIFIRE CRABAPPLE	B & B	2"CAL
CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	
DECIDUOUS SHRUBS					
CCDK	5	CARYOPTERIS X CLANDONENSIS 'DARK KNIGHT'	DARK KNIGHT BLUEBEARD	#5	
CHMI	4	CHAMAEBATIARIA MILLEFOLIUM	FERNBUSH	#5	
CHNA	3	CHRYSOTHAMNUS NAUSEOSUS	RABBITBRUSH	#5	
CSBA	5	CORNUS SERICEA 'BAILEYI'	BAYLEY'S RED TWIG DOGWOOD	#5	
HFSU	6	HYPERICUM FRONDOSUM 'SUNBURST'	SUNBURST ST. JOHN'S WORT	#5	
PHMI	6	PHILADELPHUS MICROPHYLLUS	LITTLELEAF MOCKORANGE	#5	
PODG	2	PHYSOCARPUS OPULIFOLIUS 'DART'S GOLD'	DART'S GOLD NINEBARK	#5	
PFGD	3	POTENTILLA FRUTICOSA 'GOLD DROP'	GOLD DROP BUSH CINQUEFOIL	#5	
PRAM	5	PRUNUS AMERICANA	AMERICAN PLUM	#5	
PRBE	5	PRUNUS BESSEYI	SAND CHERRY	#5	
RAGL	4	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	#5	
SPAW	6	SPIRAEA JAPONICA 'ANTHONY WATERER'	ANTHONY WATERER JAPANESE SPIREA	#5	
SPMK	3	SYRINGA PUBESCENS PATULA 'MISS KIM'	MISS KIM KOREAN LILAC	#5	
EVERGREEN SHRUBS					
ARCO	19	ARCTOSTAPHYLOS X COLORADENSIS	CHEIFTAN MANZANITA	#5	
CODI	8	COTONEASTER DIVARICATUS	SPREADING COTONEASTER	#5	
CPSG	18	CYTISUS PURGANS 'SPANISH GOLD'	SPANISH GOLD BROOM	#5	
HPCG	25	HESPERALOE PARVIFLORA 'CORAL GLOW'	CORAL GLOW RED YUCCA	#5	
MACO	24	MAHONIA AQUIFOLIUM 'COMPACTA'	COMPACT OREGON GRAPE	#5	
PMSL	19	PINUS MUGO 'SLOWMOUND'	SLOWMOUND MUGO PINE	#5	
ORNAMENTAL GRASSES					
BGBA	24	BOUTELOUA GRACILIS 'BLONDE AMBITION'	BLONDE AMBITION BLUE GRAMA	#5	
CAKF	29	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	#5	
PVSH	33	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	#5	
PERENNIALS					
ACMO	6	ACHILLEA X 'MOONSHINE'	MOONSHINE YARROW	#1	
CERU	10	CENTRANTHUS RUBER	RED VALERIAN	#1	
PEST	12	PENSTEMON STRICTUS	ROCKY MOUNTAIN PENSTEMON	#1	
SSMN	14	SALVIA X SYLVESTRIS 'MAY NIGHT'	MAY NIGHT SAGE	#1	
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME		
GROUND COVERS					
	11,173 SF	NATIVE SEED	SEED		

GENERAL NOTES:

1. VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. BE AWARE OF ANY UNDERGROUND UTILITIES. PROTECT ALL EXISTING SITE FEATURES TO REMAIN FROM POTENTIAL DAMAGE BY SITE CONSTRUCTION OPERATIONS. AVOID ANY WORK BEYOND SCOPE OF PROJECT AREA.
2. COORDINATE ALL DISCIPLINES AND SITE CONSTRUCTION THAT WILL BE NEEDED TO COMPLETE THE PROJECT IN THE TIME FRAME GIVEN AND WITHIN BUDGET. ALL ACCESS TO SITE, USE OF UTILITIES, STORAGE, AND OTHER REQUIREMENTS SHALL BE COORDINATED PRIOR TO BEGINNING WORK.
3. CONTRACTOR IS RESPONSIBLE TO INSPECT AND CONFIRM SITE CONDITIONS PRIOR TO BEGINNING WORK. COMMENCEMENT OF WORK SHALL SIGNIFY ALL CONDITIONS ARE ACCEPTABLE AND NO ALLOWANCE WILL BE MADE FOR UNRECOGNIZED CONDITIONS AFTER START OF WORK.
4. NOTIFY OWNER/LANDSCAPE ARCHITECT IMMEDIATELY UPON DISCOVERY OF UNFORESEEN SITE CONDITIONS OR PLAN DISCREPANCIES. NO CHANGE TO SPECIFIED WORK SHALL BE COMPLETED WITHOUT VERIFICATION OF EXISTING CONDITIONS AND WRITTEN APPROVAL OF MODIFICATION BY THE LANDSCAPE ARCHITECT.

PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL LOCATE ALL TREES, SHRUBS AND PLANTING BEDS ACCORDING TO LOCATIONS SHOWN ON DRAWINGS. ALL PLANTING LOCATIONS SHALL BE SUBJECT TO REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO THE START OF PLANTING OPERATIONS. LANDSCAPE CONTRACTOR SHALL MAKE MODIFICATIONS IN LOCATIONS AS DIRECTED BY LANDSCAPE ARCHITECT.
2. THE PLANT SCHEDULE IS FOR CONTRACTOR'S CONVENIENCE ONLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND REPORTING IN WRITING TO THE LANDSCAPE ARCHITECT ANY CONFLICTS RELATIVE TO IMPLEMENTATION OF THE LANDSCAPE CONSTRUCTION DOCUMENTS. VALERIAN LLC. SHALL NOT ASSUME ANY ERRORS OR OMISSIONS IN THE PLANT SCHEDULE LISTED HEREIN. THE PLANT SYMBOLS SHOWN ON THE LANDSCAPE PLAN SHALL PREVAIL SHOULD THERE BE ANY DISCREPANCIES IN QUANTITIES BETWEEN THE PLAN AND PLANT SCHEDULE.
3. LANDSCAPE CONTRACTOR SHALL PROVIDE PLANT PROTECTION AND MAINTENANCE THROUGHOUT INSTALLATION AND UNTIL FINAL ACCEPTANCE OF LANDSCAPE INSTALLATION AS FOLLOWS:
   A) ALL PLANT MATERIAL SHALL BE PROTECTED, FROM TIME OF DIGGING TO TIME OF FINAL ACCEPTANCE, FROM INJURY, EXCESSIVE DRYING FROM WINDS, IMPROPER VENTILATION, OVER-WATERING, FREEZING, HIGH TEMPERATURES, OR ANY OTHER CONDITION DAMAGING TO PLANTS.
   B) PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY IF POSSIBLE. ALL PLANTS NOT PLANTED ON THE DAY OF DELIVERY SHALL BE PLACED IN A TEMPORARY NURSERY AND KEPT MOIST, SHADED, AND PROTECTED FROM THE SUN AND WIND. EACH ROOTBALL SHALL BE COVERED ENTIRELY WITH MULCH. ALL PLANT MATERIALS SHALL BE INSTALLED PER THE PLAN DRAWINGS AND SPECIFICATIONS.
   C) LANDSCAPE CONTRACTOR SHALL PROVIDE PLANT MATERIALS THAT COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ANSI Z 60.1 "STANDARDS FOR NURSERY STOCK" UNLESS OTHERWISE SPECIFIED. CALIPER OF B&B TREES SHALL BE TAKEN 6 INCHES ABOVE THE GROUND UP TO AND INCLUDING 4 INCH CALIPER SIZE, AND 12 INCHES ABOVE THE GROUND FOR LARGER SIZES.
   D) PLANTING MAINTENANCE SHALL INCLUDE WATERING, WEEDING, CULTIVATING, RESETTING PLANTS TO PROPER GRADES OR POSITION, REESTABLISHING SETTLED GRADES. HERBICIDE IS NOT RECOMMENDED FOR ONE YEAR FOLLOWING LANDSCAPE INSTALLATION.
   E) PLANT MAINTENANCE SHALL INCLUDE THOSE OPERATIONS NECESSARY TO PROPER GROWTH AND SURVIVAL OF ALL PLANT MATERIALS. CONTRACTOR SHALL PROVIDE THIS WORK IN ADDITION TO SPECIFIC WARRANTY/GUARANTEES.
4. CONTRACTOR SHALL VERIFY AND MAINTAIN ALL SETBACKS, CLEAR ZONES AND SIGHT TRIANGLES REQUIRED BY ALL LOCAL AND MUNICIPAL CODES WHERE APPLICABLE.
5. LANDSCAPE CONTRACTOR SHALL ENSURE THAT THE LANDSCAPE INSTALLATION IS COORDINATED WITH THE PLANS PREPARED BY OTHER CONSULTANTS SO THAT THE PROPOSED GRADING, STORM DRAINAGE OR OTHER PROPOSED CONSTRUCTION DOES NOT CONFLICT WITH NOR PRECLUDE INSTALLATION AND MAINTENANCE OF LANDSCAPE ELEMENTS AS DESIGNATED ON THIS PLAN.
6. ALL LANDSCAPE AREAS SHALL BE IRRIGATED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. THE SYSTEM SHALL BE PROPERLY ZONED TO SEPARATE PLANT MATERIAL BY WATER REQUIREMENT. ALL SHRUB BEDS AND TREES IN NATIVE SEED AREAS SHALL BE IRRIGATED BY USING LOW WATER/DRIP TECHNIQUES. ALL TURF AREAS SHALL BE IRRIGATED USING POP-UP SPRAY OR ROTOR APPLICATION. LOTS TO IRRIGATED INDIVIDUALLY BY SEPARATE TAPS.
7. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY BOTH INSIDE AND OUTSIDE OF THE CONSTRUCTION LIMITS WILL BE REVEGETATED.

CLEARING & GRADING:

1. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL CODES AND DEVELOPMENT STANDARDS; UNIFORM BUILDING CODES; PERMIT CONDITIONS; AND ALL OTHER APPLICABLE CODES, ORDINANCES, STANDARDS, AND POLICIES.
2. A COPY OF THE APPROVED PLANS MUST BE ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY OTHER RELATED OR REQUIRED PERMITS PRIOR TO BEGINNING CONSTRUCTION.
4. ALL LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR (1) TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND (2) TO DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.

SOIL SPECIFICATIONS:

1. ANY PLANTING AREA THAT DOES NOT MEET THE FOLLOWING SOIL PREPARATION REQUIREMENTS ARE SUBJECT TO REJECTION AT OWNER/OWNERS REPRESENTATIVES DISCRETION.
2. LANDSCAPE CONTRACTOR IS REQUIRED TO NOTIFY OWNER/OWNERS REPRESENTATIVE A MINIMUM OF 24 HOURS PRIOR TO BEGINNING SOIL PREP WORK. SOIL PREP NOT INSPECTED BY OWNER/OWNERS REPRESENTATIVE IS SUBJECT TO REJECTION AT ANYTIME PRIOR TO INITIAL ACCEPTANCE.
3. LANDSCAPE CONTRACTOR SHALL SUBMIT DELIVERY (TRIP) TICKETS TO OWNER/OWNERS REPRESENTATIVE FOR ALL ORGANIC SOIL AMENDMENTS WITHIN 24 HOURS AFTER DELIVERY .
4. IMPORTED TOPSOIL SHALL BE FERTILE, FRIABLE, SANDY LOAM FROM THE 'A' HORIZON AND SHALL BE FREE OF STONES OVER .75" IN DIAMETER, REFUSE, PLANTS OR THEIR ROOTS, STICKS, NOXIOUS WEEDS, SALTS, SOIL STERILANTS, OR OTHER MATERIAL WHICH WOULD BE DETRIMENTAL TO PLANT GROWTH.
5. ORGANIC SOIL AMENDMENT SHALL CONSIST OF DRY, WELL-ROTTED, PULVERIZED, AGED MINIMUM ONE YEAR ORGANIC COMPOST CLASS I TYPE SUCH AS AVAILABLE FROM A-1 COMPOST, JENSEN SALES. PULVERIZED HORSE, SHEEP OR DAIRY COW MANURE ***NOT ACCEPTABLE***. SUBMIT DATED RECENT MATERIAL ANALYSIS TO OWNER/OWNERS REPRESENTATIVE TO GUARANTEE PRODUCT CONDITION AND PROOF NO LIVE WEED SEEDS AND CHEMICAL ADDITIVES ARE PRESENT.
6. PREPARED BACKFILL FOR TREE/SHRUB PLANTING SHALL BE A MIX OF 2/3 IMPORTED/ SALVAGED TOPSOIL AND 1/3 ORGANIC SOIL AMENDMENT. WHERE TREES AND SHRUBS ARE LOCATED IN LARGE BEDS PROVIDE SOIL AMENDMENT AT A RATE OF FIVE CUBIC YARDS PER ONE THOUSAND SQUARE FEET AND TILL EIGHT INCHES INTO THE SOIL THROUGHOUT THE ENTIRE PLANTING BED, NOT JUST IN EXCAVATED PLANTING HOLES.

MULCH:

1. PLANTING BEDS (AS SPECIFIED) SHALL CONTAIN 2"-4" ROCK COBBLE MULCH OVER FABRIC AT A MINIMUM DEPTH OF 3" WITH A DOUBLE SHREDDED CEDAR MULCH RING AROUND EACH TREE, SHRUB, GRASS, AND PERENNIAL. WOOD MULCH RING SHALL BE 1.5X THE CONTAINER SIZE OF THE SHRUB, GRASS OR PERENNIAL. TREE MULCH RING SHALL BE GREEN INDUSTRY STANDARD SIZE.
2. GEOTEXTILE FABRIC (FILTER FABRIC) UNDERLAYMENT IN PLANTING BEDS SHALL BE MIRAFI, MIRASCAPE, DUPONT TYPAR 3301 OR APPROVED EQUAL (SUBMIT SAMPLE).

NATIVE SEED:

1. NATIVE SEED MIX TO BE TOWN OF SUPERIOR STANDARD NATIVE SEED MIX. REFERENCE TOWN OF SUPERIOR PARKS AND RECREATION STANDARDS FOR NATIVE SEED MIX.

EDGING:

1. ALL EDGING SHALL BE 1/8" X 4" GREEN PAINTED "RYERSON TYPE" METAL EDGING W/ ROLL TOP EDGE AND ANCHOR STAKES PER MANUFACTURE'S SPECIFICATIONS OR EQUAL.

OVERALL LANDSCAPE REQUIREMENTS

	LIVE PLANT MATERIAL	
OVERALL LANDSCAPE AREA	REQUIRED (75%)	PROVIDED
21,657 SF	16,243 SF	19,491 SF

		DECIDUOUS PLANT DIVERSITY		EVERGREEN PLANT DIVERSITY	
TOTAL DECID. SHRUBS	TOTAL EVER. SHRUBS	REQUIRED (10% MAX. OF ONE SPECIES)	PROVIDED	REQUIRED (25% MAX. OF ONE SPECIES)	PROVIDED
57	113	6 MAX.	6	28 MAX.	25

	TOTAL PLANT TYPE DIVERSITY			
TOTAL PLANTS	REQUIRED (1/3 DECIDUOUS PLANTS MAX)	PROVIDED	REQUIRED (2/3 EVERGREEN PLANTS MIN)	PROVIDED
170	57	57	113	113

	TREE REQUIREMENT 1/825 SF		SHRUB REQUIREMENT 1/100 SF	
DEVELOPED LANDSCAPE AREA	REQUIRED	PROVIDED	REQUIRED	PROVIDED
9,710 SF	12	12	98	147

	TREE REQUIREMENT 1/4000 SF		SHRUB REQUIREMENT 1/500 SF	
NATURALIZED LANDSCAPE AREA	REQUIRED	PROVIDED	REQUIRED	PROVIDED
11,271 SF	3	3	23	23

PARKING LOT ISLAND LANDSCAPE REQUIREMENTS

TREE REQUIREMENT		SHRUB REQUIREMENT (ISLAND WIDTH < 7 FEET)	
REQUIRED	PROVIDED	REQUIRED	PROVIDED
9	9	8	8

PARKING LOT LANDSCAPE REQUIREMENTS

TREE REQUIREMENT		SHRUB REQUIREMENT	
REQUIRED 1 TREE/8 PARKING SPACES (114 SPACES)	PROVIDED	REQUIRED 5 SHRUBS/8 PARKING SPACES (114 SPACES)	PROVIDED
14	14	71	71

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1-800-922-1987 or 811
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

No.	REVISION	BY	DATE
1	REVISIONS PER COMMENTS	NR	04/22/24
2	REVISIONS PER COMMENTS	LR	06/07/24
3	REVISIONS PER COMMENTS	LR	07/03/24

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970 Yuma Street | Suite 130 | Denver, CO 80204

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

LANDSCAPE SCHEDULE & NOTES

PROJECT NO: KTD005.01
DESIGNED BY: LR
DRAWN BY: LR
DATE: 4/19/24

L3

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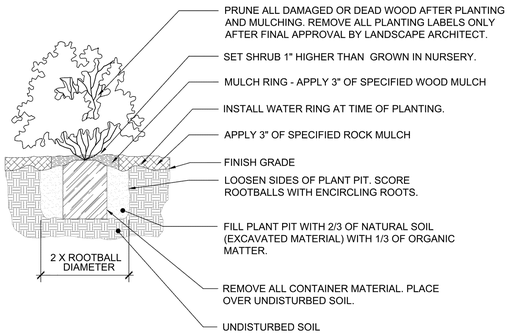
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

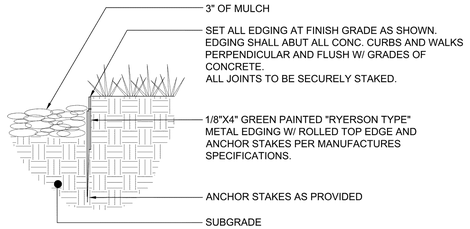
LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



NOTE: ANY PLANT NOT IN ACCORDANCE WITH COLORADO NURSERY ACT REQUIREMENTS WILL BE REJECTED. HOLD MULCH GRADE 1" BELOW EDGE OF WALK, EDGING AND CURB. JUNIPER PLANTS SHALL BE PLANTED WITH TOP OF ROOTBALL AT FINISH GRADE OF MULCH LAYER.

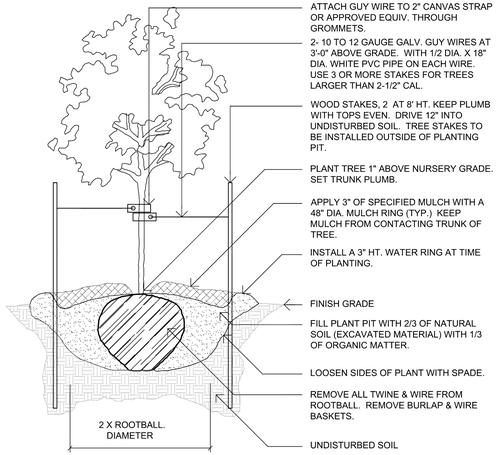
1 SHRUB / ORNAMENTAL GRASS PLANTING WITH MULCH RING

1" = 1'-0" 32 9333.13-11



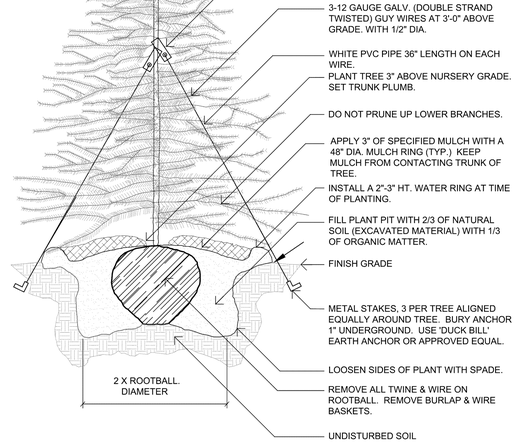
2 1/8" STEEL EDGING

1" = 1'-0" 32 9413.23-10



3 DECIDUOUS TREE PLANTING

N.T.S. ES2-01



4 EVERGREEN TREE PLANTING

N.T.S. ES2-02

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3	REVISIONS PER COMMENTS	LR	07/03/24

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

MCCASLIN & MARSHALL RD, SUPERIOR, CO

LANDSCAPE DETAILS

PROJECT NO: KTD005.01
DESIGNED BY: LR
DRAWN BY: LR
DATE: 4/19/24

L4

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



MANUFACTURER: CUSTOM BUILD
MODEL: SEAT BENCH
COLOR/FINISH: NATURAL WOOD

1 SEAT BENCH
NOT TO SCALE



MANUFACTURER: CRATE AND BARREL
MODEL: ANDORRA WEATHERED GREY WOOD OUTDOOR LOUNGE CHAIR WITH CHARCOAL GREY SUNBRELLA CUSHION #564777

2 LOUNGE CHAIR
NOT TO SCALE



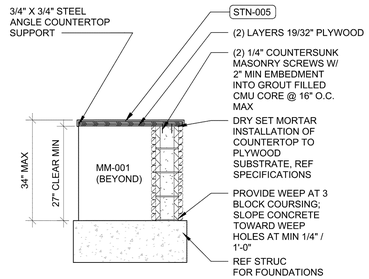
MANUFACTURER: KEYSTONE RIDGE DESIGNS
MODEL: ENZO RECTANGLE TABLE SET EZ5-2RT - ENZO RECTANGLE TABLE, 4 SEATS, WITH ARMS

3 DINING TABLES & CHAIRS
NOT TO SCALE



MANUFACTURER: FIRE PIT SURPLUS
MODEL: MODENO ROCA FIRE TABLE OFG107
COLOR: AS SHOWN

4 ROUND FIRE PIT
NOT TO SCALE



5 OUTDOOR COUNTERTOP
SCALE: 1/2" = 1'-0"

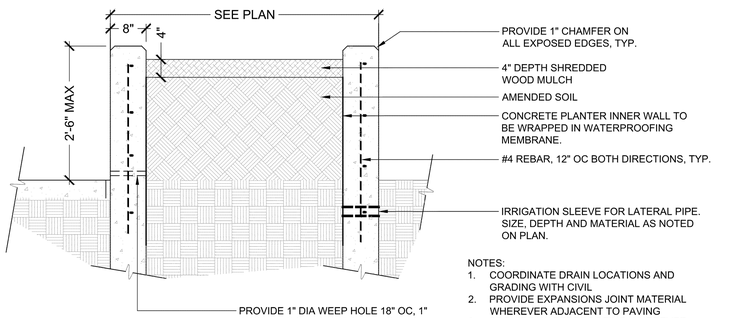
MANUFACTURER: BULL
MODEL: OUTLAW 26039NG
COLOR: STAINLESS STEEL

GRILL SECTION
SCALE: 1/2" = 1'-0"

GRILL ELEVATION
SCALE: 1/2" = 1'-0"

6 OUTDOOR GRILL
SCALE: 1/2" = 1'-0"

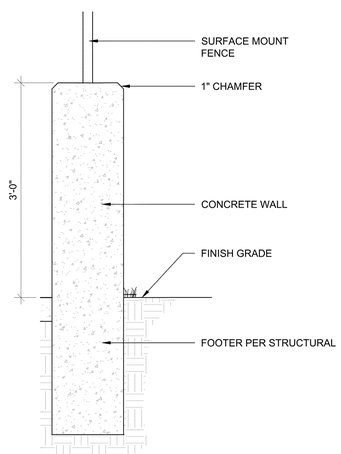
7 ARTIFICIAL TURF
SCALE: 1" = 1'-0"



NOTES:
1. COORDINATE DRAIN LOCATIONS AND GRADING WITH CIVIL
2. PROVIDE EXPANSIONS JOINT MATERIAL WHEREVER ADJACENT TO PAVING
3. PROVIDE WATERPROOFING WHEREVER ADJACENT TO BUILDING

8 RAISED PLANTER
1/16" = 1'-0"

ES2-03





FENCE MANUFACTURER: AMERISTAR
MODEL: ECHELON SURFACE MOUNT ALUMINUM FENCE - MAJESTIC 4' HEIGHT
COLOR: BLACK

9 SCREEN WALL WITH FENCE
SCALE: 1" = 1'-0"

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FINISH KEYNOTES

Tag	Keynote Description
STN-005	OUTDOOR COUNTERTOP
GC-600	GAS GRILL
MM-001	STONE VENEER

No.	REVISION	BY	DATE
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3	REVISIONS PER COMMENTS	LR	07/03/24

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

SITE DETAILS

PROJECT NO: KTD005.01
DESIGNED BY: LR
DRAWN BY: LR
DATE: 4/19/24

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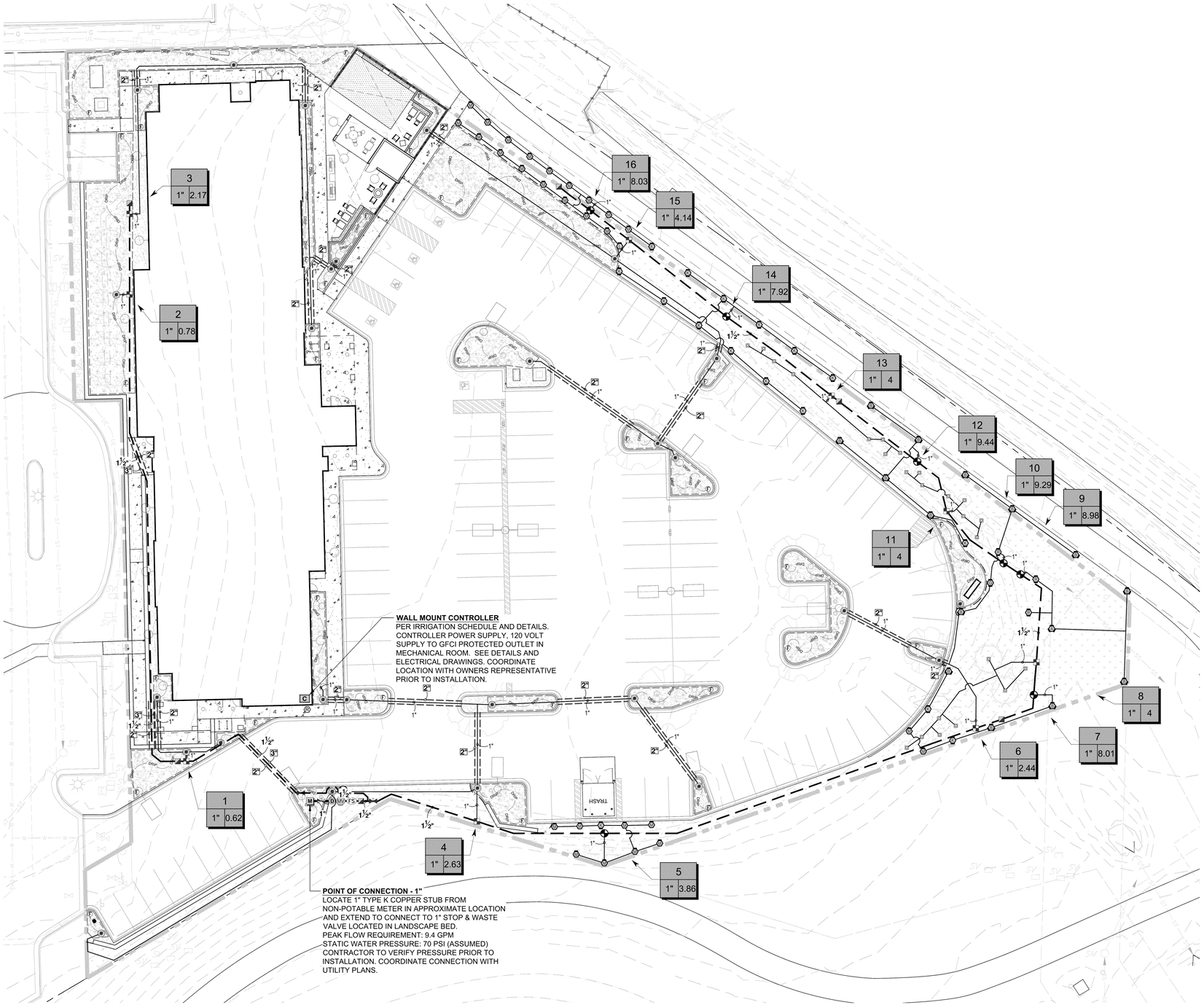
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



1 IRRIGATION PLAN

NORTH

0 20 40 60 feet

SCALE: 1" = 20'

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

IRRIGATION PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	LR
DRAWN BY:	LR
DATE:	4/19/24

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

GENERAL NOTES:

1. PRIOR TO BEGINNING WORK VERIFY THE CONTRACT DRAWINGS AGAINST ALL APPLICABLE EXISTING CONDITIONS, NOTIFY THE DESIGNER IMMEDIATELY UPON DISCOVERY OF UNFORESEEN SITE CONDITIONS OR PLAN DISCREPANCIES.
2. CONTRACTOR IS RESPONSIBLE TO INSPECT AND CONFIRM SITE CONDITIONS PRIOR TO BEGINNING WORK.
3. VERIFY LOCATION OF ALL ABOVE AND BELOW GRADE MECHANICAL, PLUMBING, ELECTRICAL/UTILITY LINES AND EQUIPMENT AND ADHERE TO ALL FEDERAL, MUNICIPAL, UTILITY PURVEYOR REQUIRED EASEMENTS, MINIMUM OFFSETS AND SETBACKS.
4. ALL ACCESS TO SITE, USE OF UTILITIES, STORAGE, AND OTHER REQUIREMENTS SHALL BE COORDINATED PRIOR TO BEGINNING WORK.
5. ALL VALVE BOX LIDS SHALL BE CARSON LIDS.
6. ALL DECODERS SHALL BE LABELED WITH ASSOCIATED ZONE NUMBER.

IRRIGATION NOTES:

1. THE CONTRACTOR IS TO INSTALL AN AUTOMATIC IRRIGATION SYSTEM THAT WILL PROVIDE COVERAGE FOR ALL LANDSCAPED AREAS AS SHOWN ON CONTRACT DRAWINGS.
2. REFER TO DETAILS FOR INSTALLATION INSTRUCTIONS.
3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND MUNICIPAL CODES FOR WORK NECESSARY IN IRRIGATION SYSTEM INSTALLATION.
4. POINT OF CONNECTION SHOWN ON THE IRRIGATION PLANS ARE PER THE CIVIL DOCUMENTS. REPORT ANY DISCREPANCIES IN THE LOCATION TO THE DESIGNER FOR CLARIFICATION OR REVISION.
5. CONTRACTOR IS TO PROVIDE ALL NECESSARY PIPE, VALVES, ETC. DOWNSTREAM FROM POINT OF CONNECTION NOT INSTALLED BY OTHER DISCIPLINES.
6. WORK SHALL BE DONE IN FULL ACCORDANCE WITH THE RULES AND REGULATIONS OF THE 2009 INTERNATIONAL PLUMBING CODE (IPC) AND ALL OTHER STATE OR LOCAL MUNICIPAL REGULATIONS CURRENT UPON THE SIGNING OF THIS CONTRACT.
7. CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. IT IS THE INTENT OF THIS DESIGN THAT ALL IRRIGATION EQUIPMENT BE INSTALLED IN LANDSCAPED AREAS WHEREVER POSSIBLE AND WITHIN THE PROPERTY LIMITS. ANY EQUIPMENT SHOWN OUTSIDE OF THESE LIMITS IS SHOWN IN THAT LOCATION FOR GRAPHICAL CLARITY ONLY.
8. LATERAL AND MAINLINE PIPE, CONTROL WIRES AND SLEEVES ARE SHOWN ON CONTRACT DRAWINGS SPACED HORIZONTALLY ON PLAN FOR GRAPHIC CLARITY ONLY. CONTRACTOR SHALL CONSOLIDATE IRRIGATION LATERALS, MAINLINES AND COMPONENTS WHEREVER POSSIBLE. IRRIGATION PIPING SHALL BE INSTALLED WITH A MINIMUM OF 4 INCHES CLEAR ON ALL SIDES.
9. CONTRACTOR SHALL MAINTAIN THE MINIMUM DEPTHS DETAILED AND SPECIFIED FOR ALL IRRIGATION EQUIPMENT.
10. CONTRACTOR IS TO VERIFY AVAILABLE PRESSURE AND FLOW AT POINT OF CONNECTION PRIOR TO INSTALLATION OF IRRIGATION SYSTEM EQUIPMENT.
11. CONTRACTOR TO COORDINATE INSTALLATION OF SLEEVING WITH OVERALL SITE CONSTRUCTION AND INSTALLATION OF PAVING AND SIDEWALKS. ALL SLEEVING UNDER PAVED SURFACES SHOWN ON CONTRACT DRAWINGS IS BY CONTRACTOR UNLESS OTHERWISE NOTED. ALL MAINLINES, LATERAL LINES, DRIP LINES AND CONTROL WIRES UNDER PAVED SURFACES ARE TO BE INSTALLED IN SLEEVING. INSTALL SLEEVING AS PER DETAIL, NOTES, SCHEDULES AND SPECIFICATIONS.
12. ALL PIPING, PVC ELECTRICAL SLEEVES, ETC. UNDER PAVING SHALL BE INSTALLED PRIOR TO PAVING WORK. NO TEES, ELLS OR OTHER TURNS IN PIPING SHALL BE LOCATED UNDER PAVING. CAP ALL ENDS HAND TIGHT PRIOR TO BACKFILL.
13. EACH MAINLINE SLEEVE REPRESENTED IN THE DRAWINGS SHALL CONSIST OF TWO SLEEVES: ONE FOR MAINLINE PIPING AND ONE FOR FIELD WIRING.
14. CONTRACTOR IS TO PROVIDE ELECTRICAL POWER TO THE AUTOMATIC CONTROLLER, SEE ELECTRICAL DRAWINGS.
15. INSTALL ALL MATERIALS AND EQUIPMENT AS SHOWN IN DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL MALE PIPE THREADS ON ALL IRRIGATION SWING JOINT AND VALVE ASSEMBLIES.
16. BACKFILLING SHALL BE DONE IN LIFTS AND COMPACTED.
17. MAINTENANCE AND OPERATION REQUIREMENTS: A SEASONAL MAINTENANCE SCHEDULE BEGINNING ON APRIL 1 THROUGH OCTOBER 1 SHALL ESTABLISH PROCEDURES FOR OPTIMUM IRRIGATION EFFICIENCY AND PREVENTIVE MAINTENANCE PRACTICES THAT WILL CONSERVE WATER RESOURCES. THE MAINTENANCE SCHEDULE SHOULD INCLUDE THE FOLLOWING ITEMS:
    - VERIFY COVERAGE OF HEADS (BI-MONTHLY)*
    - CHECK FOR BROKEN HEADS OR LEAKAGE (BI-MONTHLY)*
    - REPROGRAM CONTROLLERS ACCORDING TO THE SEASONAL NEEDS (MONTHLY)*
    - VERIFY WATER SUPPLY AND PRESSURE (UPON SYSTEM STARTUP, THEN TWO ADDITIONAL TIMES)
    - INSPECT THE BACKFLOW PREVENTER DEVICE (UPON SYSTEM STARTUP)
    - VERIFY SENSOR FUNCTIONALITY (BI-MONTHLY)*

    *ALL ITEMS SHALL BE PERFORMED UPON SYSTEM START UP AND THEN AT A MINIMUM OF THE PERIOD STATED, INSPECTIONS SHALL BE PERFORMED MORE FREQUENTLY AS REQUIRED.

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CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

POINT OF CONNECTION (P.O.C.) NOTES:

P.O.C. '1' - LOCATE 1" TYPE K COPPER STUB FROM NON-POTABLE METER IN APPROXIMATE LOCATION AND EXTEND TO CONNECT TO 1" BACKFLOW LOCATED IN LANDSCAPE BED.

AVAILABLE WATER PRESSURE (ASSUMED): THE ASSUMED AVAILABLE PSI AT THE POINT OF CONNECTION IS - **70 PSI**. CONTRACTOR SHALL TEST PRIOR TO INSTALLATION.

DESIGN PRESSURE: **70 PSI**

DESIGN FLOW : **9.4 GPM (MAX)**, (SINGLE VALVE OPERATION)

1. THE IRRIGATION SYSTEMS ARE DESIGNED WITHIN A WATER WINDOW AND SIZED TO ACCOMMODATE SINGLE VALVE STARTS NOT TO EXCEED DESIGN FLOW LISTED. CONTRACTOR TO PROGRAM CONTROLLER ACCORDINGLY.
2. CONTRACTOR TO INSTALL ALL REQUIRED EQUIPMENT IN ACCORDANCE WITH ALL LOCAL WATER PURVEYORS REQUIREMENTS.
3. CONTRACTOR TO FIELD LOCATE REQUIRED IRRIGATION EQUIPMENT DOWNSTREAM FROM METER FOR APPROVAL PRIOR TO INSTALLATION. ALL ATTEMPTS SHALL BE MADE TO INSTALL EQUIPMENT IN LANDSCAPE BEDS.
4. ALL ENCLOSURES SHALL BE SECURELY MOUNTED AND LOCKABLE TO PREVENT VANDALISM, DAMAGE AND/OR THEFT. TURN KEYS OVER TO OWNERS REPRESENTATIVE AT COMPLETION OF WORK AS PER SPECIFICATIONS.
5. CONTRACTOR TO COORDINATE CONTROLLER LOCATIONS WITH OWNERS REPRESENTATIVE PRIOR TO INSTALLATION.
6. RAIN SENSOR, MOUNT WIRELESS RAIN SENSOR WITHIN OPTIMAL RANGE FROM CONTROLLER, PER MANUFACTURERS RECOMMENDATIONS. INSTALL SENSOR ON LIGHT/UTILITY POLE A MINIMUM OF 10' ABOVE GRADE TO MINIMIZE DAMAGE/VANDALISM, CLEARLY NOTE LOCATION AND PROVIDE INFORMATION TO OWNERS REPRESENTATIVE.
7. IRRIGATION ZONES HAVE BEEN CREATED TO PROPERLY HYDROZONE THE SITE BASED ON SITE CONDITIONS AND MICROCLIMATES. IF FIELD ADJUSTMENTS ARE TO BE MADE IRRIGATION EQUIPMENT IRRIGATING A NORTH AND EAST EXPOSURE SHOULD NOT BE INSTALLED ON THE SAME ZONE AS IRRIGATION EQUIPMENT ON THE SOUTH AND WEST EXPOSURES TO ALLOW FOR MICROCLIMATE ADJUSTMENTS IN THE CONTROLLER PROGRAMMING.

IRRIGATION SCHEDULE

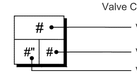
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
M O	TURF ROTARY - 1000 HUNTER MP1000 PROS-06-PRS40-CV-R 6" POP-UP WITH CHECK VALVE, PRESSURE REGULATED TO 40 PSI, MP ROTATOR NOZZLE ON PRS40 BODY. RECLAIMED WATER ID. M=MAROON ADJ ARC 90 TO 210, L=LIGHT BLUE 210 TO 270 ARC, O=OLIVE 360 ARC.	28	40
K G R	TURF ROTARY - 2000 HUNTER MP2000 PROS-06-PRS40-CV-R 6" POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 40 PSI. RECLAIMED WATER ID. MP ROTATOR NOZZLE ON PRS40 BODY. K=BLACK ADJ ARC 90-210, G=GREEN ADJ ARC 210-270, R=RED 360 ARC.	20	40
B Y A	TURF ROTARY - 3000 HUNTER MP3000 PROS-06-PRS40-CV-R 6" POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 40 PSI. RECLAIMED WATER ID. MP ROTATOR NOZZLE ON PRS40 BODY. B=BLUE ADJ ARC 90-210, Y=YELLOW ADJ ARC 210-270, A=GRAY 360 ARC.	15	40
1401 1402 1404 1408	TREE DRIPLINE LOOP 1401 XFS-06-12 SUBSURFACE DRIP TUBING WITH 0.60 GPH, PRESSURE COMPENSATING EMITTERS INTERNALLY INSTALLED IN THE DRIP TUBING AT 12" O.C. SPACING. DRIP TUBING SHALL BE INSTALLED 2" BELOW FINISHED SOIL GRADE (NOT COUNTING GROUNDCOVER MATERIAL) AND IN A DUAL "RING" AROUND THE TRUNK TO BE 50 FEET IN LENGTH AND CONTAIN APPROXIMATELY 50 DRIP EMITTERS FOR A TOTAL FLOW RATE OF 0.5 GPM (50 X 0.6 GPH = 30 GPH = 0.5 GPM). SEE DETAIL DRAWING FOR ALL THE COMPONENTS REQUIRED FOR INSTALLATION OF EACH TREE DRIP ASSEMBLY.	24	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	WIDE FLOW DRIP CONTROL KIT RAIN BIRD XCZ-100-LC-R LIGHT COMMERCIAL USES. 1IN. PEB VALVE, WITH 1IN. PRESSURE REGULATING 40PSI BASKET FILTER. 0.3-20 GPM. PURPLE CAP.	9
	PIPE TRANSITION POINT PIPE TRANSITION FROM PVC LATERAL TO DRIP TUBING WITH RISER IN 6" DRIP BOX.	27
F	FLUSH VALVE 3/4" PVC BALL VALVE IN 10" VALVE BOX.	31
	AREA TO RECEIVE DRIP EMITTERS AREA FOR DRIP EMITTERS RAIN BIRD XB-PC, SINGLE OUTLET, PRESSURE COMPENSATING DRIP EMITTERS. FLOW RATES OF 0.5 GPH=BLUE, 1.0 GPH=BLACK, AND 2.0 GPH=RED. COMES WITH A SELF-PIERCING BARB INLET X BARB OUTLET. Emitter Notes: 05PC emitters (2 assigned to each #1 plant) 10PC emitters (2 assigned to each #5 plant) 20PC emitters (6 assigned to each B & B, 2.5"Cal plant) 20PC emitters (6 assigned to each B & B, 2"Cal plant) 20PC emitters (6 assigned to each B & B, 8` HT. plant)	7,342 S.F.
	PURPLE POLY DRIP TUBING - 3/4"	1,005 L.F.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	REMOTE CONTROL VALVE RAIN BIRD PESBR-PRS-D, 1IN., 1-1/2IN., 2IN. ELECTRIC REMOTE CONTROL VALVE, GLOBE FOR RECLAIMED WATER IRRIGATION. WITH PRESSURE REGULATOR MODULE.	7
	QUICK COUPLER VALVE RAIN BIRD 44-NP 1" BRASS NON-POTABLE QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, PURPLE THERMOPLASTIC RUBBER COVER, AND 2-PIECE BODY.	6
	GATE VALVE - 2-1/2" AND SMALLER MATCO-NORCA 514T BRASS GATE VALVE, FULL PORT, WITH SQUARE NUT OPERATOR. IPS. WHEEL HANDLE. SAME SIZE AS MAINLINE PIPE.	2
	MUELLER STOP & WASTE VALVE 1" FIPT MUELLER H10284-N1 BRASS STOP & WASTE VALVE, 1" X 1" FIPT X FIPT CONNECTION. NON-REGULATED.	1
MV	MASTER VALVE - NORMALLY CLOSED 1" RAIN BIRD EFB-CP BRASS MASTER VALVE, THAT IS CONTAMINATION PROOF W/SELF-FLUSHING FILTER SCREEN AND FD-101TURF DECODER. GLOBE CONFIGURATION, RECLAIMED WATER COMPATIBLE.	1
D	MANUAL DRAIN VALVE MUELLER ORISEAL #H-10283, WITH BRASS SWING JOINT ASSEMBLY. INSTALL PER INSTALLATION DETAIL.	1
C	RAIN BIRD ESPLXME2 W/ (2) ESPLXMSM12 36 STATION, TRADITIONALLY-WIRED, COMMERCIAL CONTROLLER. (1) ESPLXME2 12-STATION, INDOOR/OUTDOOR, PLASTIC WALL-MOUNT ENCLOSURE W/ (2) ESPLXMSM12 - 12-STATION EXPANSION MODULES.	1
R	RAIN BIRD WR2-RFS WIRELESS RAIN/FREEZE SENSOR.	1
FS	FLOW SENSOR -1" RAINBIRD MJ100B - 1" FLOW SENSOR FOR USE WITH RAIN BIRD ESP-ME.	1
M	WATER METER 1"	1

	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21	2,175 L.F.
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21	884.9 L.F.
	IRRIGATION MAINLINE: TYPE K COPPER PIPE	4.3 L.F.
	PIPE SLEEVE: PVC CLASS 160 SDR 26	351 L.F.

Valve Callout



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3	REVISIONS PER COMMENTS	LR	07/03/24

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

MCCASLIN & MARSHALL RD, SUPERIOR, CO

IRRIGATION SCHEDULE & NOTES

PROJECT NO:	KTD005.01
DESIGNED BY:	LR
DRAWN BY:	LR
DATE:	4/19/24

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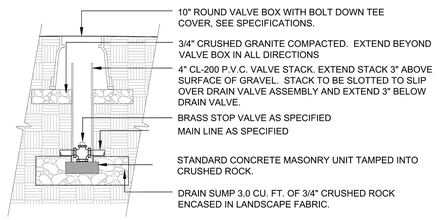
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

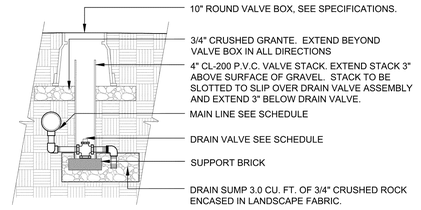
LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

NOTE:
1. BRAND (DV) INTO VALVE BOX LID WITH 2" HIGH LETTERS MIN.
2. VALVE BOX SHALL HAVE PURPLE NON POTABLE LID.
3. SET TOP OF VALVE BOX LID LEVEL WITH FINISHED GRADE OF ADJACENT UNDISTURBED TURF GRASS AREAS.



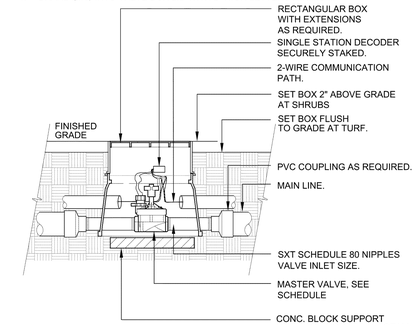
1 STOP AND WASTE VALVE
1/2" = 1'-0" 328406.33-20

NOTE:
1. BRAND (DV) INTO VALVE BOX LID WITH 2" HIGH LETTERS MIN.
2. EXTEND VERTICAL DISCHARGE NIPPLE INTO DRAIN SUMP A MINIMUM OF 3".
3. SET TOP OF VALVE BOX LID LEVEL WITH FINISHED GRADE OF ADJACENT UNDISTURBED TURF GRASS AREAS.



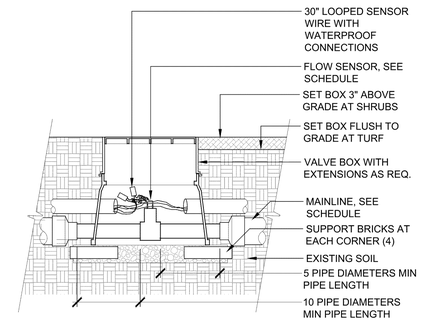
2 MANUAL DRAIN VALVE
1/2" = 1'-0" 328409.86-13

NOTE:
1. BRAND (MV) INTO VALVE BOX LID WITH 2" HIGH LETTERS MINIMUM.



3 MASTER CONTROL VALVE
1 1/2" = 1'-0" 328406.23-12

NOTE:
1. HEAT BRAND (FS) ON VALVE BOX LID IN 2" HIGH LETTERS MINIMUM



4 FLOW SENSOR
1" = 1'-0" 328409.63-11

NOTE:
1. HEAT BRAND (GV) ON LID WITH 2" HIGH CHARACTERS

5 GATE VALVE UNDER 3"
1" = 1'-0" DPR 328406.33-90

6 QUICK COUPLING VALVE
1 1/2" = 1'-0" 328413.46-04

NOTE:
1. HEAT BRAND VALVE AND CONTROLLER NUMBER ON LID WITH 2" HIGH CHARACTERS.
2. BOX TO HAVE PURPLE NON-POTABLE (N.P.) LID.

7 REMOTE CONTROL VALVE
1" = 1'-0" 328406.13-06

8 TURF SPRAY-FLEX ASSEMBLY
3" = 1'-0" 328403.13-03

NOTE:
1. HEAT BRAND CONTROLLER AND VALVE NUMBER ON LID WITH 2" HIGH CHARACTERS.
2. BOX TO HAVE PURPLE NON-POTABLE (N.P.) LID.

9 1" DRIP VALVE/FILTER/REGULATOR
1" = 1'-0" 328413.76-30

NOTE:
1. HEAT BRAND 'ZC' ON LID WITH 2" HIGH CHARACTERS.
2. BOX TO HAVE PURPLE NON-POTABLE (N.P.) LID.

10 DRIPLINE ZONE CONTROL
1 1/2" = 1'-0" 328413.46-04

NOTE:
1. PLACE EMITTERS 3/4 BETWEEN THE TRUNK AND OUTTER DRIPLINE.
2. EVENLY SPACE EMITTERS AROUND PLANT.
3. STAKE THE DRIP TUBING AT EACH TEE, ELL, COUPLER, AT EACH EMITTER OR TRANSFER, AND AT 6'-0" MAX O.C.

11 TYPICAL DRIP TUBING
1 1/2" = 1'-0" 328413.43-01

12 1/4" TUBING SINGLE OUTLET EMITTER
3" = 1'-0" 328413.13-26

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

IRRIGATION DETAILS

PROJECT NO: KTD005.01
DESIGNED BY: LR
DRAWN BY: LR
DATE: 4/19/24

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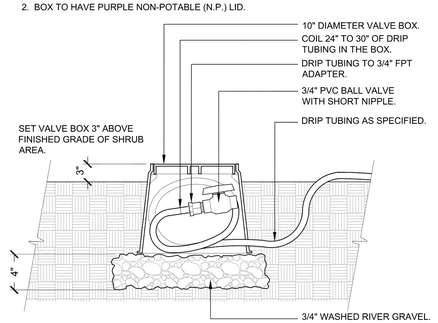
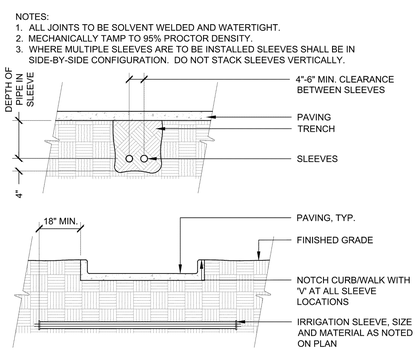
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

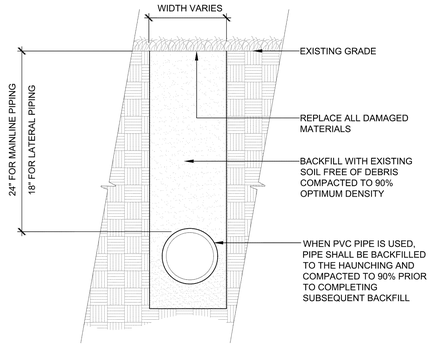
LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



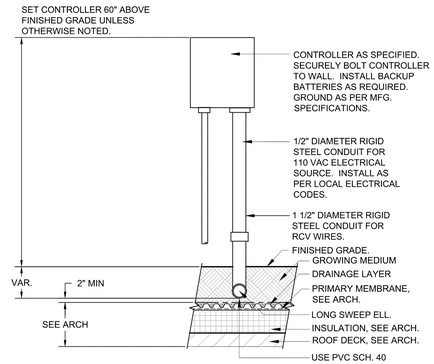
1 DRIP FLUSH VALVE
1 1/2" = 1'-0" 328413.49-04



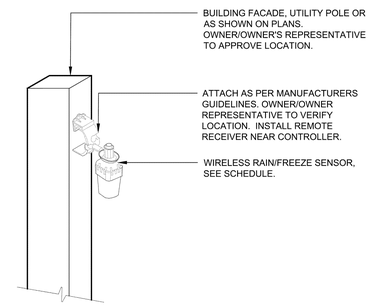
2 SLEEVING
3/8" = 1'-0" 328409.76-17



3 TRENCH DETAIL
1 1/2" = 1'-0" 328409.76-103



4 WALL MOUNT CONTROLLER
1/2" = 1'-0" 328409.13-09



5 WIRELESS RAIN/FREEZE SENSOR
3/4" = 1'-0" 328409.66-13

NOTE:
1. CONTRACTOR TO INSTALL ALL DRIP TUBING IN TURF AND NATIVE AREAS 2-3" BELOW GRADE.
2. DIAMETER OF DRIP RINGS ARE DEPENDENT ON TREE CANOPY SIZE.

6 TREE DRIP TUBING LAYOUT
N.T.S. 328413.56-101

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FINAL DRAINAGE REPORT

FOR

Everhome Suites Water Quality Facility
Superior, CO

Original Submittal: January 5, 2024
Revised Submittal: April 22, 2024

Owner/Developer/Applicant:
KT Development
7951 E. Maplewood Ave., Suite 122
Greenwood Village, CO 80111
Contact: Luke Taylor
Phone: (303) 906-9002
Email: ltaylor@kt-development.com

Prepared By:
Entitlement & Engineering Solutions, Inc.
3801 E. Florida Ave, Ste 425
Denver, Colorado 80210
(303) 572-7997

E.E.S. Job No. KTD005.01

I. CERTIFICATION:

I hereby certify that this drainage assessment report for the Town of Superior Town Center Everhome Suites Water Quality Facility was prepared under my direct supervision in accordance with the provisions of Town of Superior Standards & Specifications (2021) and was designed to comply with the provisions thereof.

Krysta M. Houtchens P.E.
Registered Professional Engineer
State of Colorado No. 49550

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I. General Location and Description

A. Site Location

The Everhome Suites project site is located east of McCaslin Boulevard and Marshall Road and east of the Element Hotel within the Superior Town Center. The Vicinity Map below shows the general vicinity of the property area.



VICINITY MAP

i. Township, Range, ¼ Section. Everhome Suites Water Quality Facility is located in the NW 1/4, Section 19, Township 1 South, Range 69 West of 6th PM in the Town of Superior, Boulder County, Colorado.

ii. Street Location. Everhome Suites is located within the Superior Town Center Park which is bounded by US 36 on the north and east, the Element Hotel to the west, and Coal Creek on the south.

iii. Major Drainageways and Facilities. Coal Creek flows west to east through the Superior Town Center Park.

iv. Tributary Developments. There are no offsite triburtary areas to the proposed water quality facility. The tributary area is limited to on-site runoff from the Everhome Suites.

B. Description of Property

The project site is at Lot 3B, Block 1, Superior Town Center Filing No. 1B Replat No. 3. More specifically the site address is 3 S. Marshall, Superior, CO 80227 and is a 1.97 acre

parcel. Lot 3B is currently zoned Planned Development (PD) and will remain as such for the proposed development.

Matrix Design Group (Matrix) evaluated the Old Town tributary watershed, reviewed previous design reports, and analyzed the existing drainage system to define the on-going needs for stormwater management – See "Superior Town Center Park, Detention Basin #11, Drainage Assessment," dated April 18, 2018.

Basin #11 provided regional stormwater controls for detention and water quality. As development occurred in the watershed, stormwater was managed by individual sub-basins on-site for each development area with detention and water quality per Town of Superior Drainage Criteria, rather than regionally. With most of the watershed developed and the upstream detention and water quality basins in-place, the requirement for detention and water quality at the outfall has significantly diminished.

The Town of Superior waived detention requirements for a facility immediately adjacent to the receiving major drainageway of Coal Creek. Waiving detention of this 1.97-acre watershed will not have any adverse flood impacts to downstream properties. Only water quality is required to be provided for stormwater runoff. The watershed needs a minimum of 0.053 acre-feet of Water Quality Capture Volume (WQCV) for an Extended Dry Detention facility.

Important Design Facts:
- Tributary Area – 1.97 acres
- Tributary Composite Imperviousness – 76.1%
- WQCV only for Underground Extended Dry Detention (no flood control detention)
- 40 hour drain time
- Design Volume 0.053 acre-feet
- Inlet pipes 12", 15" with 100-year capacity

Proposed construction will consist of a four-story, 59,971 GSF extended stay hotel building and 114 parking spaces located on a 1.97 acres parcel. The area disturbed will be 1.97 acres. In addition to the hotel and the parking lot, drive aisles, landscaping and utility services will also be constructed. In the existing condition as an undeveloped site, the project site is 2% impervious. The site imperviousness increases by 74.1% in the proposed condition for an impervious value of 76.1%. The report details the stormwater measures incorporated to account for the site impervious increase.

The site in the existing condition contains 2% impervious area. The site in the proposed condition contains 1.58 acres (68,868 SF) of impervious area.

C. Description of the Watershed

i. Tributary Watershed. See the Drainage Basin Map for the watershed boundary.

ii. Tributary Area. 1.97 acres of developed area.

iii. Ground Cover and Soils. The watershed is currently vacant and covered with native weeds and grasses. Proposed land uses are commercial developments, roadways, and parking lots. NRCS hydrologic soil groups (HSG) are Type B soils for the watershed which have moderate infiltration rates.

iv. Major Drainageways. Coal Creek is the receiving major drainageway. The

contributing drainage area of the Coal Creek waterway at McCaslin Boulevard is 25.7 square miles, as referenced in the 2014 *Flood Hazard Area Delineation*.

D. Groundwater Investigation

A *Geotechnical Engineering Study and Pavement Thickness Design* was completed by Kumar & Associates, Inc., dated November 13, 2023. Per the above reference geotechnical report ground water was encountered in Borings 1 and 2 at depths of about 19 feet and 14 feet, respectively. The remaining four borings were found to be dry. Borings 1 through 4 were left open to allow for a follow-up groundwater level measurement with Borings P-1 and P-2 backfilled subsequent to drilling. Stabilized groundwater was measured in Borings 1, 3, and 4 at depths of about 16.5, 22.5, and 22 feet, respectively when measured 7 days subsequent to drilling. Groundwater was not present in Boring 2 at the time of the follow-up measurement. The open borings were backfilled upon completion of the follow-up measurements. Based on the above listed findings, groundwater is not anticipated to have an impact on the proposed development.

E. Subsurface Soils Analysis

The *Geotechnical Engineering Study and Pavement Thickness Design* was completed by Kumar & Associates, Inc., dated November 13, 2023 determined the onsite soil to be a relatively thin layer of topsoil underlain by existing fill extending to naturally deposited (native) granular soils at depths ranging from about 4 feet to 6 feet in Borings 1 through 4 and the the maximum explored depth of about 5 feet in Borings P-1 and P-2. The native granular soils extended to claystone bedrock at depths ranging from about 14 feet to 21 feet below existing grades at the time of drilling. The claystone continued to the maximum explored depths of about 25 feet or 30 feet.

The recommendation from Kumar & Associates, Inc. is that the existing fill should be removed from beneath foundations and soil-supported slabs, movement-sensitive exterior flatwork, and pavements consistent with the recommendations for fill removal presented in specific sections of their report and replaced with structural fill. The structural fill should meet the material and placement requirements presented in their report.

II. Floodplain

A. Major Drainageway – Designated Floodplain

According to the FEMA Flood Insurance Rate Map number 08013C0583K, effective date August 15, 2019, the site is located in Zone X which is within of the 100-year flood plain.

A LOMR-F, case number 19-08-0084A, effective date December 3, 2018, removes the majority of the site from the 100-year flood plain. The proposed Finished Floor Elevation is set at 5475.50, which is well above the base flood plain elevation in this location.

III. Drainage Basins and Sub-Basins

A. Major Drainage Basins

The total tributary area to the proposed Everhome Suites facility is 1.97 acres. See Drainage Area Map. The site in the historic condition consists of one major drainage basin (H1), and the general historic drainage pattern at this site is runoff entering the site from the western property line and sheet flowing to the east. There is approximately 10 feet of

fall from the western property line to the eastern property line where the runoff is collected into a riprap swale that conveys the runoff into Coal Creek.

Everhome Suites Improvements include a treated outfall to the major drainageway of Coal Creek.

Basin H1: Basin H1 is 1.97 acres and consists of the undeveloped lot with an impervious value of 2.0%. The 5-year and 100-year C values were determined to be 0.16 and 0.20, respectively; and anticipated 5-year runoff flows of 0.81 CFS and 100-year runoff flows of 1.93 CFS. Flows from Basin H1 are directed to a riprap swale that conveys the runoff into Coal Creek.

B. Minor Drainage Basins

The site in the proposed condition consists of 6 total basins (A1-A5, BY-E) which direct flows towards Coal Creek. The stormwater is conveyed through on-site stormwater inlets and the existing riprap swale at the southeast corner of the site. The following is a description of the proposed drainage basins.

Basin A1: Basin A1 is 0.34 acres and consists of the footprint of the proposed Everhome Suites Hotel for an impervious value of 90.0%. The 5-year and 100-year C values were determined to be 0.85 and 0.90, respectively; and anticipated 5-year runoff flows of 1.31 CFS and 100-year runoff flows of 2.67 CFS. Flows from Basin A1 are directed underground through 6" roof drains and will connect directly into the proposed stormwater manhole. Flows will continue towards the ADS water quality system. Captured runoff will be conveyed from the ADS system via a proposed 18" RCP storm pipe towards a proposed riprap swale at the southeastern corner of the site that will ultimately flow into Coal Creek.

Basin A2: Basin A2 is 0.06 acres and consists of the landscape area on the northwest corner of the site and parking stalls for an impervious value of 14.6%. The 5-year and 100-year C values were determined to be 0.25 and 0.29, respectively; and anticipated 5-year runoff flows of 0.06 CFS and 100-year runoff flows of 0.12 CFS. Flows from Basin A2 are conveyed via sheet flow and drainage swale to a 12" Nyloplast inlet where the developed runoff is fully captured. The captured runoff is then conveyed underground through a 6" PVC pipe to the proposed ADS water quality system.

Basin A2.1: Basin A2.1 is 0.03 acres and consists of the landscape area on the northwest corner of the site and sidewalk for an impervious value of 28.0%. The 5-year and 100-year C values were determined to be 0.35 and 0.39, respectively; and anticipated 5-year runoff flows of 0.03 CFS and 100-year runoff flows of 0.07 CFS. Flows from Basin A2.1 are conveyed via sheet flow and drainage swale to a 12" Nyloplast inlet where the developed runoff is fully captured. The captured runoff is then conveyed underground through a 6" PVC pipe to the proposed ADS water quality system.

Basin A3: Basin A3 is 0.04 acres and consists of the ramp and landscaped area between the western face of the Everhome Suites building and the property line for an impervious value of 70.2%. The 5-year and 100-year C values were determined to be 0.66 and 0.71, respectively; and anticipated 5-year runoff flows of 0.13 CFS and 100-year runoff flows of 0.26 CFS. Flows from Basin A3 are conveyed via sheet flow and drainage swale to a 12" Nyloplast inlet and ADS slotted drain system where the developed runoff is fully captured. The captured runoff is then conveyed underground through a 6" PVC pipe to the proposed ADS water quality system.

Basin A4: Basin A4 is 0.10 acres and consists of the drive aisle, parking stalls, sidewalk, and landscaped area at the southwestern corner of the site for an impervious value of 87.6%. The 5-year and 100-year C values were determined to be 0.79 and 0.84, respectively; and anticipated 5-year runoff flows of 0.34 CFS and 100-year runoff flows of 0.70 CFS. Flows from Basin A4 are directed to a type 13 combo inlet, then underground through a 12" RCP pipe to the proposed ADS water quality system.

Basin A5: Basin A5 is 0.13 acres and consists of the parking lot, landscaped islands and sidewalk for an impervious value of 91.2%. The 5-year and 100-year C values were determined to be 0.82 and 0.86, respectively; and anticipated 5-year runoff flows of 0.50 CFS and 100-year runoff flows of 1.01 CFS. Flows from Basin A5 are directed to a Type 13 combination inlet, then underground through a 12" RCP pipe to the proposed ADS water quality system.

Basin A6: Basin A6 is 0.97 acres and consists of the parking lot, landscaped islands and sidewalk for an impervious value of 96.3%. The 5-year and 100-year C values were determined to be 0.85 and 0.90, respectively; and anticipated 5-year runoff flows of 3.67 CFS and 100-year runoff flows of 7.45 CFS. Flows from Basin A6 are directed to four Type 13 combination inlets, then underground through a 12" RCP pipe to the proposed ADS water quality system.

Basin BY-E: Basin BY-E is 0.23 acres and consists of the undisturbed area between the parking lot and the property line for an impervious value of 2.0%. This basin will remain in the existing condition. The 5-year and 100-year C values were determined to be 0.16 and 0.20, respectively; and anticipated 5-year runoff flows of 0.22 CFS and 100-year runoff flows of 0.52 CFS. Flows from Basin BY-E are directed to the existing riprap swale and into Coal Creek.

IV. Drainage Design Criteria

A. Criteria

This project's storm drainage design follows the regulations, standards, and criteria of the Town of Superior's Standards & Specifications (2021) and the Mile High Flood District's Urban Storm Drainage Criteria Manual, Volumes I, II, and III ('USDCM').

B. Calculations

i. Hydrologic Criteria

Peak runoff values were calculated using the rational method:

$$Q = CIA$$

Q = Storm runoff in cubic feet per second (cfs)
C = Rainfall coefficients - ratio runoff to rainfall
I = Rainfall intensity in inches per hour
A = Drainage area in acres

The minor (5-year) and major (100-year) storm events were calculated using the

Rainfall Intensity Frequency Values from the criteria. The runoff coefficient values "C" were taken from the UDSCM, Volume 1. Composite "C" values were determined for each basin and times of concentration (tc) calculated using UDSCM methods also described in the referenced Volume 1 document. All hydrologic calculations for the 5-year and 100-year frequency events are included in the Appendix.
Hydrologic summary of the data and methods utilized in this report includes:

- Design Rainfall: 1-hour point rainfall depths of 1.34 and 2.57 for the 5-year and 100-year storm events, respectively. Depths were obtained from Table 5.2 of the criteria.
- Hydrologic Soil Group: NRCS hydrologic soil group B
- Conveyance System Design Storm Recurrence Intervals: 5-year and 100-year
- Detention is per the USDCM, Volume 2 full spectrum detention design guidelines as aided by the MHFD Excel design tool "Detention Design" available through the district's website.

ii. Hydraulic Criteria

Inlet capacities have been analyzed per the procedures of the USDCM, Volume 1 street, inlet, and storm drain guidelines as aided by the MHFD Excel design tool "Street Capacity and Inlet Sizing" available through the district's website. Hydraulic Grade Line analysis was completed utilizing Bentley StormCAD software.
Hydraulic data and analysis methods in this report include:

- Inlets and storm drains sized for the 100-year event.
- Drains sized with a manning's 'n' value of 0.011 for PVC and 0.013 for RCP

iii. Storm Water Quality Criteria

The on-site water quality pond will be provided with an Extended Detention Basin facility, satisfying all Town of Superior permit requirements. Design is per the USDCM, Volume 3 guidelines and is aided by the aforementioned "Detention Design" tool.

C. Detention Design

The Town of Superior Land Use Code Section 16-26-20 (d) indicates that drainage and flood control measures should use the most restrictive criteria of SMD-1 Rules and Regulations, Urban Drainage & Flood Control District (UDFCD) Criteria, or Boulder County Criteria. This project used criteria outlined by UDFCD.

In general, detention is necessary to minimize impacts from development to downstream properties. According to the UDFCD Urban Storm Drainage Criteria Manual, "Planning and design of stormwater drainage systems should not be based on the premise that problems can be transferred from one location to another. Urbanization tends to

increase downstream peak flow by increasing runoff volumes and velocities. Stormwater runoff can be stored and slowly released via detention facilities to manage peak flows, thereby reducing the drainage capacity required immediately downstream." However, it is generally accepted that exemptions for flood control detention can be made for development of an area immediately adjacent to a major drainageway that is capable of conveying the fully developed basin 100-year flood. The peak stormwater runoff from the 1.97-acre watershed will have no impact on the peak flows from the 25.7 square mile Coal Creek watershed. This is commonly referred to as "beat the peak" where the peak flow from the small watershed will have arrived and ended prior to the peak flow from the much larger watershed. UDFCD staff generally concur that detention is not required by the Town at this location, although it does provide some minor benefit to match historic release rates into Coal Creek. However, water quality must be provided for developed areas, regardless, and cannot be waived in accordance with the Town's MS4 permit.

D. Water Quality Design

The water quality capture volume was generated with a contributing watershed area of 1.97 acres and 76.1% impervious. The proposed water quality treatment system is required to have a water quality capture volume of 2,309 CF. To achieve this volume, a proposed ADS Stormtech chamber system with a surface area of 727 SF will be utilized. The water quality pond will utilize an outlet structure with three (3), one-half-inch (1/2") orifices.

Water Quality within the ADS system will be handled by the isolation row within the ADS system. The ADS system also includes a 2' sump at the manhole where flow enters the system. There are currently three different third party tests for this product, all showing a minimum of 80% TSS removal; The City of Charlotte field testing report for Isolator Row, 2006 Tennessee Tech Lab Report, and University of New Hampshire Test Report.

E. Maintenance

The detention facilities will be private and maintenance of the facilities will be the responsibility of the property owner. For the underground facility, inspection ports will be provided for access to the system. Refer to general maintenance and inspection guidelines in the appendix for more information.

V. Conclusions

A. Compliance with Standards

This drainage report presents the drainage analysis for an Everhome Suites at 3 S. Marshall Road and complies with the regulations, standards, and criteria of the Town of Superior's Standards & Specifications (2021) and the Mile High Flood District's Urban Storm Drainage Criteria Manual, Volumes I, II, and III ('USDCM').

B. Impact of Proposed Development

The proposed development will improve upon the historical condition as it exists today. The embankment that goes to Coal Creek will see less erosion and degradation than it currently does which will benefit the downstream water quality.

VI. References

The following drainage studies were used in the current drainage report for the Superior Town Center Park:

• *Preliminary Drainage Report for Superior Town Center Planned Development,* Town of Superior, November 2012, Civil Resources, LLC

• *Drainage Report Update for Superior Town Center Phase 1 and Discovery Office Park,* RC Superior Metro District and Aweida Properties Inc., September 2015, Civil Resources, LLC

• *Superior Town Center Park Detention Basin #11, Drainage Assessment,* Matrix Design Group, April 18, 2018

• *Drainage Letter, Superior Town Center – Block 1 Lot 3 – Hotel Site.* Civil Resources, LLC, dated August 22, 2016

Appendix A – Reference Materials

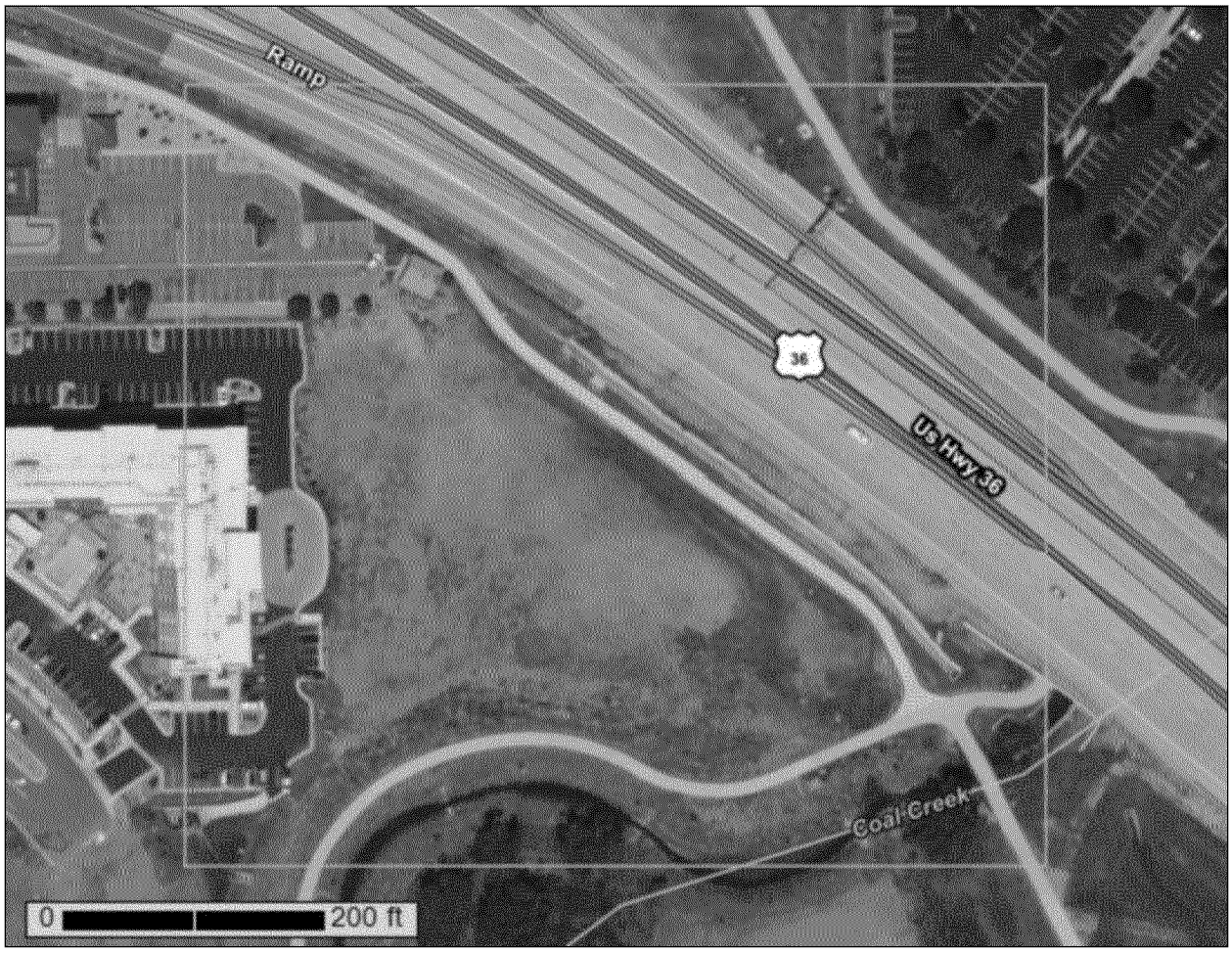
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Boulder County Area, Colorado



January 3, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map



Map Scale: 1:1,540 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Boulder County Area, Colorado
Survey Area Data: Version 20, Aug 24, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 1, 2020—Jul 2, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CaB	Calkins sandy loam, 1 to 3 percent slopes	4.8	53.3%
MdB	Manter sandy loam, 1 to 3 percent slopes	1.3	14.6%
NdD	Nederland very cobbly sandy loam, 1 to 12 percent slopes	2.9	32.1%
Totals for Area of Interest		**9.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Boulder County Area, Colorado

CaB—Calkins sandy loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: jprc
Elevation: 4,900 to 5,500 feet
Mean annual precipitation: 12 to 18 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 140 to 155 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Calkins and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Calkins

Setting

Landform: Terraces, flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

H1 - 0 to 14 inches: sandy loam
H2 - 14 to 60 inches: sandy loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B
Ecological site: R067BY031CO - Sandy Bottomland
Hydric soil rating: No

Minor Components

Valmont

Percent of map unit: 6 percent
Ecological site: R067BY042CO - Clayey Plains
Hydric soil rating: No

Mcclave

Percent of map unit: 6 percent
Ecological site: R067BY035CO - Salt Meadow
Hydric soil rating: No

Nunn

Percent of map unit: 3 percent
Ecological site: R067BY042CO - Clayey Plains
Hydric soil rating: No

MdB—Manter sandy loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: jps3
Elevation: 4,900 to 5,500 feet
Mean annual precipitation: 12 to 18 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 140 to 155 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Manter and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Manter

Setting

Landform: Terraces
Landform position (three-dimensional): Side slope, tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy eolian deposits and/or outwash

Typical profile

H1 - 0 to 6 inches: sandy loam
H2 - 6 to 16 inches: fine sandy loam
H3 - 16 to 60 inches: sandy loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R067BY024CO - Sandy Plains
Hydric soil rating: No

Minor Components

Calkins

Percent of map unit: 8 percent
Ecological site: R067BY031CO - Sandy Bottomland
Hydric soil rating: No

Ascalon

Percent of map unit: 7 percent
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

NdD—Nederland very cobbly sandy loam, 1 to 12 percent slopes

Map Unit Setting

National map unit symbol: jps7
Elevation: 5,500 to 6,500 feet
Mean annual precipitation: 15 to 20 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 140 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Nederland and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nederland

Setting

Landform: Alluvial fans, terraces
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Cobbly loamy alluvium

Typical profile

H1 - 0 to 7 inches: very cobbly sandy loam
H2 - 7 to 20 inches: very cobbly sandy clay loam
H3 - 20 to 60 inches: very cobbly sandy loam

Properties and qualities

Slope: 1 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: R049XY213CO - Cobbly Foothill
Hydric soil rating: No

Minor Components

Valmont

Percent of map unit: 20 percent
Hydric soil rating: No

References

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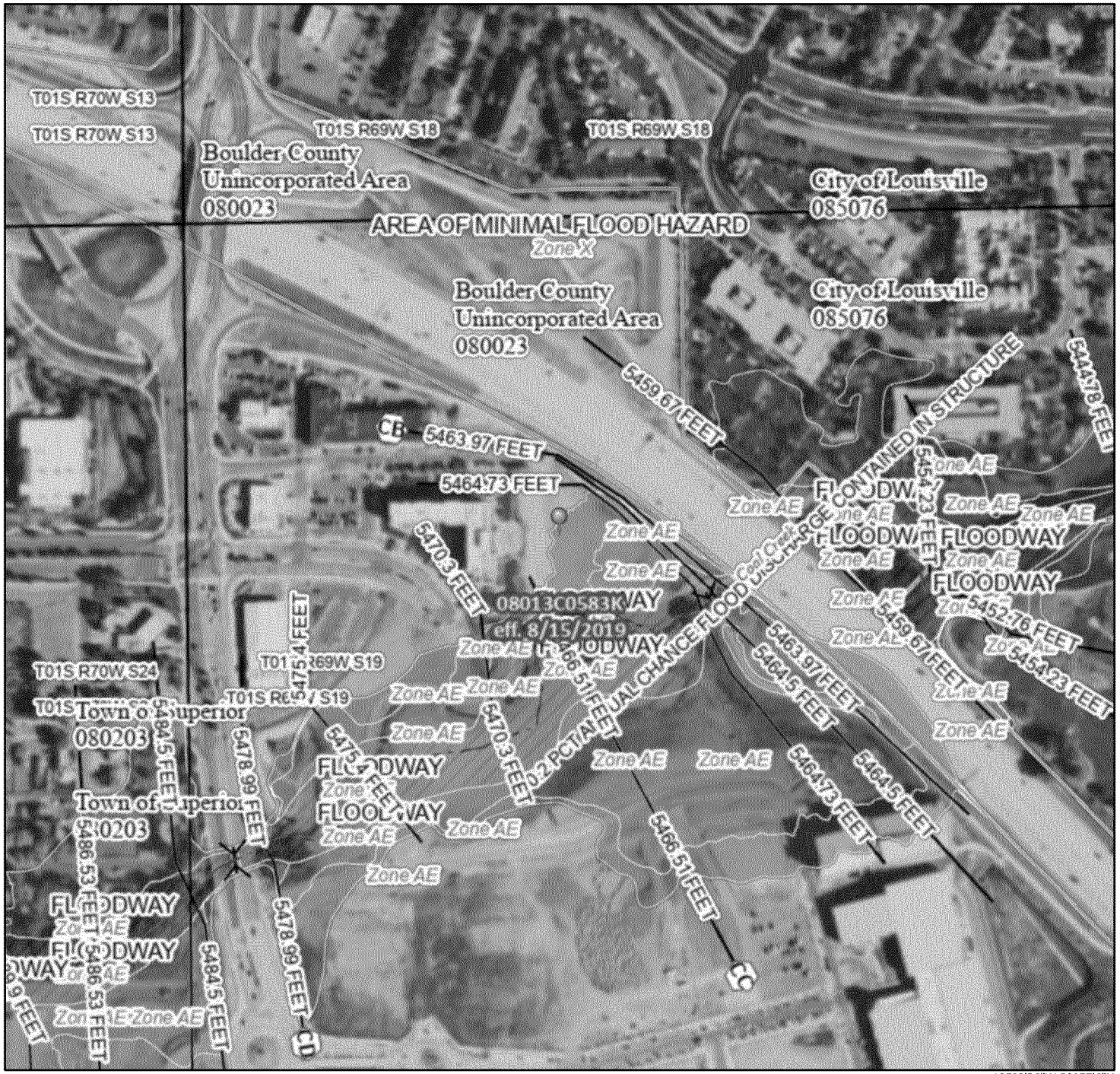
National Flood Hazard Layer FIRMette

FEMA

105°10'3"W 39°57'33"N



105°9'26"W 39°57'6"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/5/2023 at 6:54 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION BASED ON FILL DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	TOWN OF SUPERIOR, BOULDER COUNTY, COLORADO	A portion of Lot 3B, Block 1, Superior Town Center Filing No. 1B Replat No. 3, as shown on the Plat recorded as Document No. 03560623, in the Office of the County Clerk and Recorder, Boulder County, Colorado The portion of property is more particularly described by the following metes and bounds:
	COMMUNITY NO.: 080203	
AFFECTED MAP PANEL	NUMBER: 08013C0583J	
	DATE: 12/18/2012	
FLOODING SOURCE: COAL CREEK		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY:39.955476, -105.162202 SOURCE OF LAT & LONG: LOMA LOGIC DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (NAVD 88)	LOWEST ADJACENT GRADE ELEVATION (NAVD 88)	LOWEST LOT ELEVATION (NAVD 88)
3B	1	Superior Town Center Filing No. 1B Replat 3	3 Marshall Road	Portion of Property	X (shaded)	--	--	5466.6 feet

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

LEGAL PROPERTY DESCRIPTION REVISED BY LETTER OF MAP REVISION
PORTIONS REMAIN IN THE FLOODWAY
FILL RECOMMENDATION

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Revision based on Fill for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the described portion(s) of the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document revises the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION BASED ON FILL DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LEGAL PROPERTY DESCRIPTION (CONTINUED)

BEGINNING at the Northwest corner of said Lot 3B and assuming the North line of Lot 3B as bearing North 88°42'50" East a distance of 110.00 feet with all other bearings contained herein relative thereto; THENCE along the Northerly line of said Lot 3B, North 88°42'50" East a distance of 110.00 feet to the beginning point of a non-tangent curve; THENCE along the arc of a curve concave to the Southwesterly an arc distance of 151.23 feet, a Radius of 5574.64 feet, a Delta of 01°33'16" and is subtended by a Chord bearing South 55°24'31" East a distance of 151.23 feet to a line non-tangent to this curve; THENCE departing said Northerly line, South 46°25'13" East a distance of 87.76 feet; THENCE South 49°21'50" East a distance of 47.10 feet; THENCE South 35°35'12" East a distance of 34.35 feet; THENCE South 09°22'00" West a distance of 32.35 feet; THENCE South 43°25'53" West a distance of 33.62 feet; THENCE South 53°55'27" West a distance of 38.93 feet to a point on the Southerly line of said Lot 3B; THENCE along said Southerly line, South 70°48'10" West a distance of 78.11 feet; THENCE departing said Southerly line, North 85°08'26" West a distance of 41.14 feet to a point on the Southerly line of Lot 3B;THENCE along Southerly and Westerly lines of said Lot 3B the next Seven (7) courses; THENCE North 72°34'13" West a distance of 57.78 feet; THENCE South 59°24'46" West a distance of 134.83 feet; THENCE North 01°17'10" West a distance of 41.28 feet; THENCE North 59°24'46" East a distance of 20.64 feet; THENCE North 01°17'10" West a distance of 169.95 feet; THENCE South 88°42'50" West a distance of 18.00 feet; THENCE North 01°17'10" West a distance of 134.00 feet to the POINT OF BEGINNING.

PORTIONS OF THE PROPERTY REMAIN IN THE FLOODWAY (This Additional Consideration applies to the preceding 1 Property.)

A portion of this property is located within the Special Flood Hazard Area and the National Flood Insurance Program (NFIP) regulatory floodway for the flooding source indicated on the Determination/Comment Document while the subject of this determination is not. The NFIP regulatory floodway is the area that must remain unobstructed in order to prevent unacceptable increases in base flood elevations. Therefore, no construction may take place in an NFIP regulatory floodway that may cause an increase in the base flood elevation, and any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management. The NFIP regulatory floodway is provided to the community as a tool to regulate floodplain development. Modifications to the NFIP regulatory floodway must be accepted by both the Federal Emergency Management Agency (FEMA) and the community involved. Appropriate community actions are defined in Paragraph 60.3(d) of the NFIP regulations. Any proposed revision to the NFIP regulatory floodway must be submitted to FEMA by community officials. The community should contact either the Regional Director (for those communities in Regions I-IV, and VI-X), or the Regional Engineer (for those communities in Region V) for guidance on the data which must be submitted for a revision to the NFIP regulatory floodway. Contact information for each regional office can be obtained by calling the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or from our web site at http://www.fema.gov/about/regoff.htm.

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION BASED ON FILL DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

FILL RECOMMENDATION (This Additional Consideration applies to the preceding 1 Property.)

The minimum NFIP criteria for removal of the subject area based on fill have been met for this request and the community in which the property is located has certified that the area and any subsequent structure(s) built on the filled area are reasonably safe from flooding. FEMA's Technical Bulletin 10-01 provides guidance for the construction of buildings on land elevated above the base flood elevation through the placement of fill. A copy of Technical Bulletin 10-01 can be obtained by calling the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or from our web site at http://www.fema.gov/mit/tb1001.pdf. Although the minimum NFIP standards no longer apply to this area, some communities may have floodplain management regulations that are more restrictive and may continue to enforce some or all of their requirements in areas outside the Special Flood Hazard Area.

REVISED BY LETTER OF MAP REVISION (This Additional Consideration applies to the preceding 1 Property.)

The effective National Flood Insurance Program map for the subject property, has since been revised by a Letter of Map Revision (LOMR) dated 11/16/2017. The 11/16/2017 LOMR has been used in making the determination/comment for the subject property.

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration

TITLE EXCEPTIONS:

1. Any facts, rights, interests, or claims thereof, not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.

2. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.

3. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.

4. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.

5. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date of the proposed insured acquires of record for value the estate or interest or mortgage thereon covered by this Commitment.

6. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.

7. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water.

8. EXISTING LEASES AND TENANCIES, IF ANY.

9. AN UNDIVIDED ONE HALF INTEREST IN AND TO ALL COAL AND OTHER MINERALS, INCLUDING OIL AND GAS, AS RESERVED BY ATKINSON, IN DEED RECORDED OCTOBER 16, 1948 IN BOOK 835 AT PAGE 30, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.

(AFFECTS THE W1/2 NW1/4 SECTION 19–1S–69W)
Includes all of the subject property. Not plotted.

10. AN UNDIVIDED ONE HALF INTEREST IN AND TO ALL COAL AND OTHER MINERALS, INCLUDING OIL AND GAS, AS RESERVED BY BROWN, IN DEED RECORDED OCTOBER 16, 1948 IN BOOK 835 AT PAGE 33, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.

(AFFECTS THE W1/2 NW1/4 SECTION 19–1S–69W)
Same description as exception 9. Includes all of the subject property. Not plotted.

11. THOSE MINERAL INTERESTS, TOGETHER WITH ANY RIGHTS OF INGRESS AND EGRESS FOR THE PURPOSE OF MINING, DRILLING, AND EXPLORATION, AS CONVEYED OR AS EVIDENCED BY MINERAL DEEDS RECORDED MARCH 9, 1964 IN BOOK 1325 AT PAGE 120; APRIL 7, 1977 UNDER RECEPTION NO. 217506; JULY 1, 1980 UNDER RECEPTION NO. 401365; JULY 29, 1988 UNDER RECEPTION NO. 00932643; MAY 7, 1997 UNDER RECEPTION NO. 1696587; MARCH 30, 2012 UNDER RECEPTION NO. 3213069 AND MARCH 12, 2013 UNDER RECEPTION NO. 3296444.

(AFFECTS THE W1/2 NW1/4 SECTION 19–1S–69W)
Ruffenach and Rosenbaums Addition lies north of the subject property. The south 16 acres of the Northwest Quarter of the Northwest Quarter of Section 19 does include part of the subject property. Plotted.

12. OIL, GAS AND OTHER MINERAL RIGHTS AS RESERVED BY DENISON, MALCZYK, DEUEL AND CABLE, IN DEEDS RECORDED MAY 23, 1979 UNDER RECEPTION NOS. 338662, 338663, 338664 AND 338665, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.

(AFFECTS THE W1/2 NW1/4 SECTION 19–1S–69W)
Includes all of the subject property. Not plotted.

13. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS OF TOWN OF SUPERIOR ANNEXATION, AS EVIDENCED IN TOWN OF SUPERIOR ORDINANCE #98–O–1 AND MAP RECORDED FEBRUARY 23, 1998 UNDER RECEPTION NOS. 1773928 AND 1773929.
Includes all of the subject property. Not plotted.

14. ANY TAX, LIEN, FEE, ASSESSMENT OR EFFECT OF INCLUSIONS OF SUBJECT PROPERTY IN THE NORTHERN COLORADO WATER CONSERVANCY DISTRICT, AS EVIDENCED BY ORDER OF THE DISTRICT COURT, RECORDED JULY 22, 1999 UNDER RECEPTION NO. 1963438 AND ORDER RECORDED OCTOBER 18, 2002 UNDER RECEPTION NO. 2345200.
Includes all of the subject property. Not plotted.

15. REQUEST FOR NOTICE OF SURFACE DEVELOPMENT BY NRC–CO 1 LLC, RECORDED SEPTEMBER 28, 2009 UNDER RECEPTION NO. 3032258.

(AFFECTS THE NW1/4 SECTION 19–1S–69W)
Includes all of the subject property. Not plotted.

16. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN SUPERIOR TOWN CENTER PLANNED DEVELOPMENT PLAN (ZONING), EVIDENCED BY RECORD OF APPROVAL BY THE TOWN OF SUPERIOR RECORDED FEBRUARY 04, 2013 UNDER RECEPTION NO. 3287102 AND AMENDMENT THERETO, EVIDENCED BY RECORD OF APPROVAL BY THE TOWN OF SUPERIOR RECORDED MAY 20, 2015 UNDER RECEPTION NO. 3446671, AND FURTHER AMENDMENT THERETO, EVIDENCED BY RECORD OF APPROVAL BY THE TOWN OF SUPERIOR RECORDED JUNE 22, 2016 UNDER RECEPTION NO. 3525749. (THE PLANS ARE NOT RECORDED)
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.

17. EASEMENTS AS SET FORTH ON THE PLAT OF SUPERIOR TOWN CENTER FILING NO. 1 RECORDED FEBRUARY 4, 2013 UNDER RECEPTION NO. 3287103.

NOTE: THE LOCATION OF SAID EASEMENTS ARE PURPORTEDLY SHOWN AND PLOTTED ON ALTA/NSPS LAND TITLE SURVEY PREPARED BY KING SURVEYORS, JOB # 20160578–A, DATED FEBRUARY 1, 2017.
The 25' trail easement shown on this plat which included part of the subject property has been vacated. Not plotted. The 25' Superior Metro District easement shown on this plat does not include any of the subject property, and is plotted.

18. EASEMENTS, TERMS, CONDITIONS AND NOTES ON THE PLAT OF SUPERIOR TOWN CENTER FILING NO. 1B RECORDED FEBRUARY 25, 2014 UNDER RECEPTION NO. 3367475.

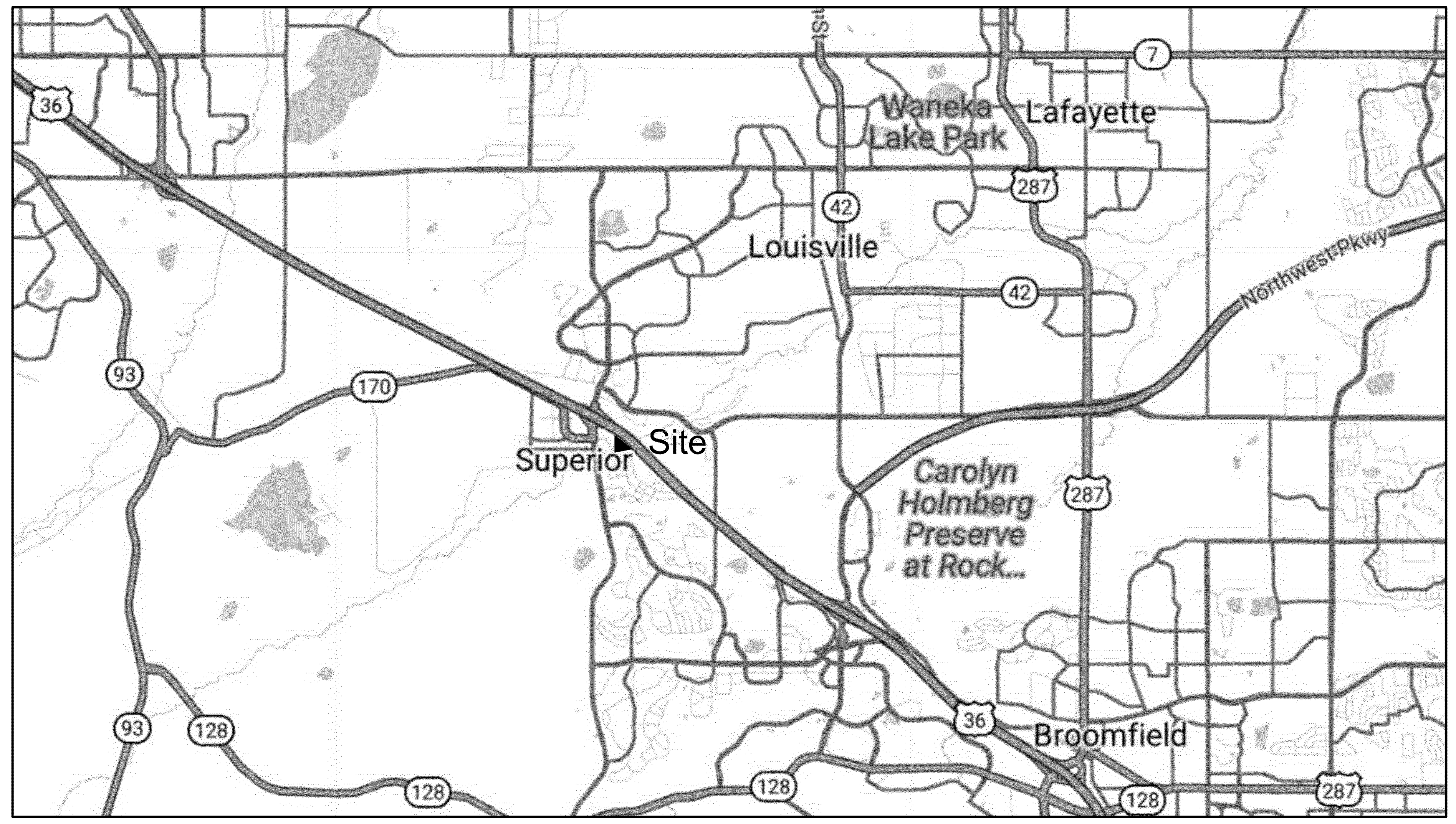
NOTE: THE LOCATION OF SAID EASEMENTS ARE PURPORTEDLY SHOWN AND PLOTTED ON ALTA/NSPS LAND TITLE SURVEY PREPARED BY KING SURVEYORS, JOB # 20160578–A, DATED FEBRUARY 1, 2017.

ADDENDUM TO FINAL PLAT RECORDED NOVEMBER 14, 2014 UNDER RECEPTION NO. 3413028.

NOTE: RATIFICATION AND CONFIRMATION OF PLATS RECORDED APRIL 14, 2015 UNDER RECEPTION NO. 03439335.
Easements include part of the subject property, except the portion of the trail easement that has been vacated. Plotted.

19. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN FINAL DEVELOPMENT PLAN – PHASE 1 FOR THE SUPERIOR TOWN CENTER, EVIDENCED BY RECORD OF APPROVAL BY THE TOWN OF SUPERIOR RECORDED MARCH 11, 2014 UNDER RECEPTION NO. 03369753. (THE PLANS ARE NOT RECORDED)
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.

20. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN SUBDIVISION IMPROVEMENT AGREEMENT BY AND BETWEEN TOWN OF SUPERIOR AND RC SUPERIOR, LLC, RECORDED MARCH 11, 2014 UNDER RECEPTION NO. 03369754, FIRST AMENDMENT RECORDED JANUARY 14, 2014 UNDER RECEPTION NO. 3413029 AND UNRECORDED SECOND AMENDMENT DATED NOVEMBER 9, 2015 STORED AS OUR IMAGE 21366425, AND THIRD AMENDMENT THERETO RECORDED NOVEMBER 16, 2016 UNDER RECEPTION NO. 03557512.
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.



VICINITY MAP 1" = 5000'

TITLE EXCEPTIONS (Cont'd):

21. RESTRICTIVE COVENANTS, WHICH DO NOT CONTAIN A FORFEITURE OR REVERTER CLAUSE, BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS CONTAINED IN MASTER DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR SUPERIOR TOWN CENTER BY RC SUPERIOR, LLC, RECORDED APRIL 14, 2015, UNDER RECEPTION NO. 03439339 AND FIRST AMENDMENT IN CONNECTION THEREWITH WAS RECORDED OCTOBER 18, 2021 UNDER RECEPTION NO. 03921592.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED JANUARY 26, 2017 UNDER RECEPTION NO. 03571646.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED FEBRUARY 2, 2017 UNDER RECEPTION NO. 03572998.

CORRECTIVE AMENDMENT OF CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED FEBRUARY 3, 2017 UNDER RECEPTION NO. 03573103.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED MARCH 20, 2017 UNDER RECEPTION NO. 03581164 AND 03581160.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED MARCH 29, 2017 UNDER RECEPTION NO. 03583192.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED MARCH 29, 2019 UNDER RECEPTION NO. 03703627.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED JUNE 06, 2019 UNDER RECEPTION NO. 03716742.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED FEBRUARY 19, 2020 UNDER RECEPTION NO. 03766889.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED JANUARY 05, 2021 UNDER RECEPTION NO. 03847644.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED DECEMBER 05, 2022 UNDER RECEPTION NO. 03990813.
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.

22. EASEMENTS, CONDITIONS, COVENANTS, RESTRICTIONS, RESERVATIONS AND NOTES ON THE PLAT OF SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623.
Easements include part of the subject property. Plotted.

23. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN SUBDIVISION IMPROVEMENT AGREEMENT (FDP1–PHASE III) RECORDED SEPTEMBER 01, 2016 UNDER RECEPTION NO. 03541132.
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.

24. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN SUBDIVISION IMPROVEMENT AGREEMENT RECORDED OCTOBER 12, 2016 UNDER RECEPTION NO. 03550038.
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.

25. ANY TAX, LIEN, FEE, OR ASSESSMENT BY REASON OF INCLUSION OF SUBJECT PROPERTY IN THE STC METROPOLITAN DISTRICT NO. 3, AS EVIDENCED BY INSTRUMENT RECORDED FEBRUARY 2, 2017 UNDER RECEPTION NO. 03572956.
Includes Lot 3A adjoining to the west. Not plotted.

26. TERMS, CONDITIONS, PROVISIONS, BURDENS, OBLIGATIONS AND EASEMENTS AS SET FORTH AND GRANTED IN RECIPROCAL EASEMENT AGREEMENT BY AND BETWEEN RC SUPERIOR LLC AND QC GLACIER STANDBY SUPERIOR LLC, RECORDED FEBRUARY 2, 2017 UNDER RECEPTION NO. 03572997.
Includes part of the subject property. Easement is not defined mathematically. Not plotted.

27. THE EFFECT OF VACATION EXHIBIT, RECORDED APRIL 20, 2017, UNDER RECEPTION NO. 03587780.
The 25' trail easement which included part of the subject property has been vacated. Not plotted.

28. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN INCLUSION AGREEMENT FOR STC METROPOLITAN DISTRICTS NOs. 1, 2, AND 3 RECORDED DECEMBER 18, 2019 UNDER RECEPTION NO. 03755495.
Includes all of the subject property. Not plotted.

29. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN AMENDED AND RESTATED DECLARATION OF THE SUPERIOR TOWN CENTER PAYMENT IN LIEU OF TAXES RECORDED DECEMBER 19, 2019 UNDER RECEPTION NO. 03755979.
Includes all of the subject property. Not plotted.

30. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN DECLARATION OF COVENANTS IMPOSING AND IMPLEMENTING THE SUPERIOR TOWN CENTER PUBLIC IMPROVEMENTS FEE RECORDED DECEMBER 22, 2020 UNDER RECEPTION NO. 03844551.
Includes all of the subject property. Not plotted.

GENERAL NOTES:

1. Statute of limitations disclosure required per 13–80–105, C.R.S.:
Notice: According to Colorado law you MUST commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

2. Statement of lineal units required per 38–51–106(1)(l), C.R.S.: Lineal unit of measure used in this survey is U.S. Survey Foot.

3. The boundary lines shown on this survey represent a professional opinion by this surveyor as to where the boundary lines hereby retraced were originally laid out on the ground and subsequently accepted by the affected land owners. The discovery of additional evidence may result in a different opinion.

4. All copyrights to publications by Foresight West Surveying, Inc. are reserved. Additionally, all field books, notes, sketches and electronic files are instruments of service and shall remain the sole property of Foresight West Surveying, Inc. If this survey is deposited with the County in compliance with 38–51–107, C.R.S., Foresight West Surveying, Inc. accepts no liability from proprietary or confidential information disclosed to the public by the contents herein.

5. Preservation of Boundary Monumentation: Any person who knowingly removes, alters or defaces:
1) any public land survey monument (defined by 38–53–103(18), C.R.S. as any land boundary monument established on the ground by a cadastral survey of the United States government and any mineral survey monument established by a United States mineral surveyor and made a part of the United States public land records), or
2) any land survey corner (defined by 38–53–103(6), C.R.S. as any land survey corner the position of which controls the location of the boundaries of a tract or parcel of land), or a restoration of any such monument, even if said person has title to the land on which said monument is located, commits a class 2 misdemeanor punishable by a fine of up to $1,000 and/or 1 year in jail unless, prior to such removal, said person has caused a Colorado professional land surveyor to establish at least two witness corners or reference marks for each such monument removed and has filed or caused to be filed a monument record pursuant to article 53 of title 38, C.R.S. (18–4–508, C.R.S.)

6. Oil, gas, coal, mineral, water, ditch, reservoir, geothermal, avigation, grazing or other rights, as well as development, zoning, lease, fire district or other restrictions, both recorded and unrecorded, may affect this property and not be plottable graphically hereon.

7. The locations of any underground utilities shown hereon are not to be considered all–inclusive and may be inaccurate. Underground utility locations may have been determined from available construction plans and as–built maps, surface markings established by independent locators or utility companies, or from surface features. Underground utilities shown hereon have not been exposed by this firm and may vary in actual location, usage, material, size and/or existence. This firm accepts no liability for inaccurate work by utility locators. Per Title 9, Article 1.5, C.R.S., underground utilities must be marked prior to any digging or drilling by submitting a request to the Utility Notification Center of Colorado. Call (811) at least 72 hours in advance.

8. All users of this survey are hereby notified that this survey in no way constitutes a title search by Foresight West Surveying Inc. for determination of (a)right to title, (b)chain of title/abstract, (c)the historical compatibility of all descriptions of this property with all descriptions of adjoining properties, and (d)easements, rights–of–way and other instruments of record that may impact title to this property. Additionally, unwritten rights to this property may exist which are unknown to this firm. A reasonable effort was made to research the records for this property and the adjoining properties in accordance with the usual and customary standard of care for land surveyors practicing in Colorado.

9. Title Policy Reference: For all information regarding right to title and easements, rights–of–way or other title burdens affecting such right to title to this property, this survey relied upon title commitment issued by Land Title Guarantee Company/Old Republic National Title Insurance Company, Order Number: ABZ70822737, with an effective date of 09/28/2023.

10. Building Setback notice: Due to frequent changes in and differing interpretations of zoning ordinances, the owner is urged to contact the governing municipality(ies) for guidance relating to setback requirements prior to planning future improvements on this property. No zoning report or letter citing setback restrictions was provided.

11. Basis of bearings statement required per 38–51–106(1)(e), C.R.S.:
Bearings are based upon the northeasterly line of Lot 3B, Block 1, Superior Town Center Filing No. 1B Replat No. 3, said line being an arc with a record chord bearing of North 54°18'05" West as shown on said plat. The monuments are described hereon.

12. Elevations are based upon a post–processed static GNSS connection made to NGS Bench Mark W 413 (PID KK1549) utilizing Geoid12B to model the ellipsoid separation. Elevation: 5459.62 (NAVD 88).

13. This parcel lies within Zone X and Special Flood Hazard Zone AE as shown on FEMA FIRM map no. 08013C0583K, revised 8/15/2019. Flood zone limits shown hereon were scaled and are not to be relied upon for accuracy.

14. Measured dimensions shown hereon reflect the results of a least squares adjustment of the field measurements.

15. No evidence of recent earth moving work, building construction or building additions was observed in the process of conducting the field work.

16. No proposed changes in street right of way lines was provided. No evidence of recent street or sidewalk constructions or repairs was observed in the process of conducting the field work.

17. All found and set monuments are fairly close to ground surface unless noted otherwise.

18. Any monuments shown hereon that are not tied to this survey were not used as control corners and are shown for posterity only.

LEGAL DESCRIPTION:

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO

SURVEYOR'S CERTIFICATION:

This certification does not extend to any unnamed persons or legal entities without written recertification expressly naming such persons or legal entities.

To KT DEVELOPMENT LLC, A COLORADO LIMITED LIABILITY COMPANY and LAND TITLE GUARANTEE COMPANY/OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 6(a), 6(b), 8, 11(b), 13, 16 and 17 of Table A thereof. The fieldwork was completed on October 26, 2023.

Pursuant to Colorado Revised Statute 38–51–106 (1)(d) and Colorado State Board of Licensure for Professional Land Surveyors Rule 1.6(B)(2), the undersigned further certifies that this survey was performed under my responsible charge, is based upon my knowledge, information and belief, is in accordance with applicable standards of practice, and this certification is not a guaranty or warranty, either expressed or implied.

Lester J. Ludeman, PLS 25636
Email: lludeman@foresightwest.com
Signature and date through seal:
(Required by Colorado law)



Sheet 1 of 3

Project No. 2023141

Project Description
Lot 3B Superior Town Center 1B

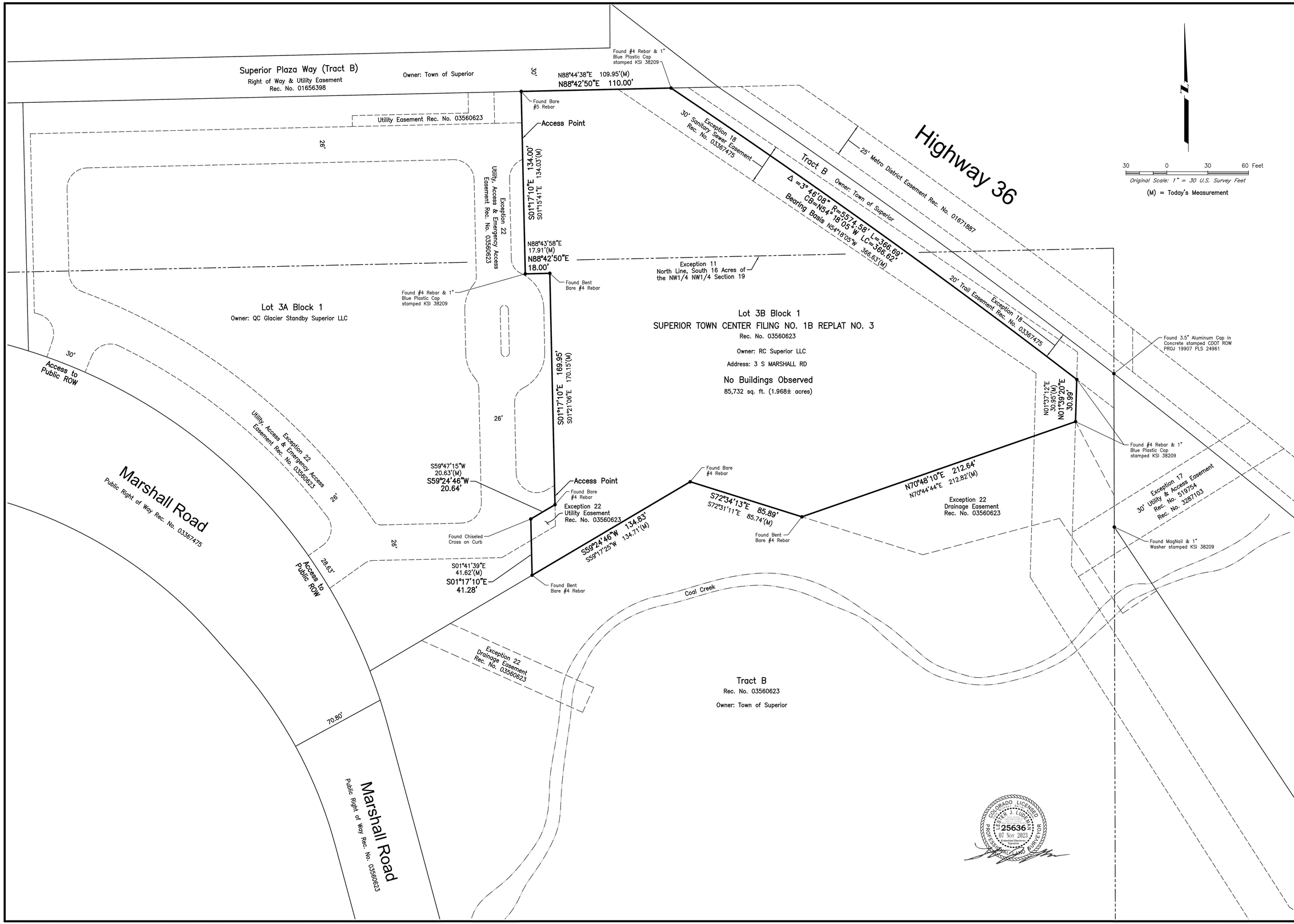
Revisions | By

Horizontal Scale: One Inch = 5000'
Contour Interval: N/A
Surveyed By: KAP
Calculated: LJL
Drawn: LJL
An electronic seal is embedded in the cover page and applies to all attached pages bearing the Foresight West logo

ALTA/NSPS LAND TITLE SURVEY

PART OF THE NORTHWEST QUARTER OF SECTION 19,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6th P.M.,
TOWN OF SUPERIOR, BOULDER COUNTY, COLORADO

FWS FORESIGHT WEST SURVEYING INC.
1309 S. Inca Street, Denver, CO 80223 303–504–4440 ForesightWest.com
Boundary Control Construction Oil and Mineral Global Positioning



Sheet 2 of 3

Project No. 2023141

Project Description
Lot 3B Superior Town Center 1B

Revisions

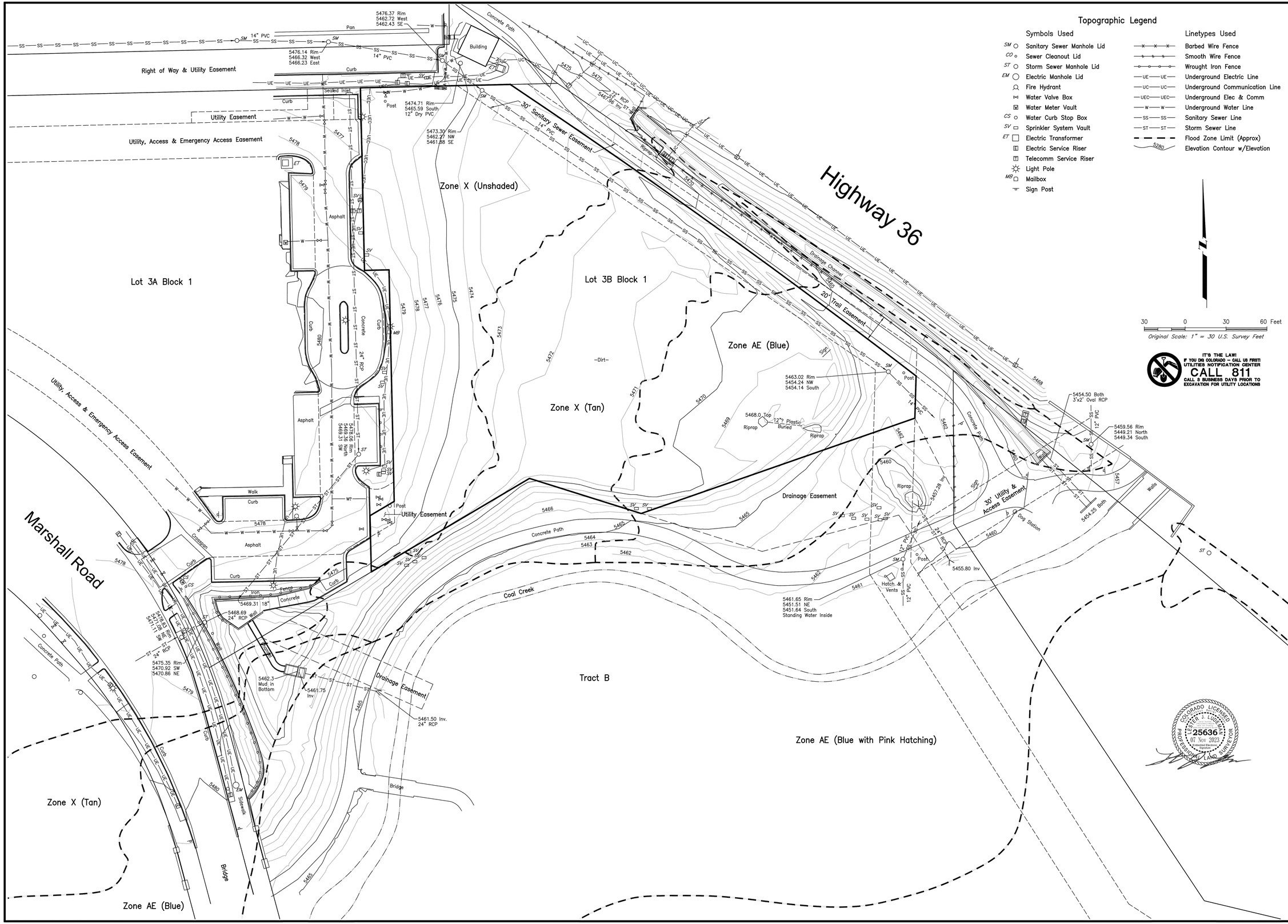
By

Horizontal Scale: One Inch = 30'
Contour Interval: N/A
Surveyed By: KAP
Calculated: LJL
Drawn: LJL
An electronic seal is embedded in the cover page and applies to all attached pages bearing the Foresight West logo

ALTA/NSPS LAND TITLE SURVEY

PART OF THE NORTHWEST QUARTER OF SECTION 19,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6th P.M.,
TOWN OF SUPERIOR, BOULDER COUNTY, COLORADO

FWS FORESIGHT WEST SURVEYING INC.
1309 S. Inca Street, Denver, CO 80223 303-504-4440 ForesightWest.com
Boundary Control Construction Oil and Mineral Global Positioning



Sheet 3 of 3

Project No. 2023141

Project Description
Lot 3B Superior Town Center 1B

By	Revisions

Horizontal Scale: One Inch = 30'
Contour Interval: 1 Foot
Surveyed By: KAP
Calculated: LJL
Drawn: LJL
An electronic seal is embedded in the cover page and applies to all attached pages bearing the Foresight West logo

ALTA/NSPS LAND TITLE SURVEY

PART OF THE NORTHWEST QUARTER OF SECTION 19,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6th P.M.,
TOWN OF SUPERIOR, BOULDER COUNTY, COLORADO

COLORADO LICENSED
LESTER J. LUDEMAN
25636
07 Nov 2023
Embedded Electronic Signature
PROFESSIONAL LAND SURVEYOR

FWS FORESIGHT WEST SURVEYING INC.
1309 S. Inca Street, Denver, CO 80223 303-504-4440 ForesightWest.com
Boundary Control Construction Oil and Mineral Global Positioning

Appendix B – Hydrologic Computations

Runoff Coefficients

Corridor / Design Package: KT Dev - Hotels
System Name: Historic Condition

Computed: AMG Date: 3/29/2024
Checked: KMH Date: 3/29/2024

Sub-Basin Data			Composite C			Sub Area (Pavement)				Sub Area (Roof)				Sub Area(Lawns C Group soils)			
Basin ID	Description	Total Area (ac)	C_5	C_{100}	i	C_5	C_{100}	i	Area (ac)	C_5	C_{100}	i	Area (ac)	C_5	C_{100}	i	Area (ac)
H1	SITE TO COAL CREEK	1.97	0.16	0.20	2.0	0.88	0.93	100	0.000	0.85	0.90	90	0.000	0.16	0.20	2	1.970
Improvements Composite		1.97	0.16	0.20	2.0	0.88	0.93	100	0.000	0.85	0.90	90	0.000	0.16	0.20	2	1.970
COMPOSITE ZONE LOT =		1.97	0.16	0.20	2.0												

Runoff Coefficients

Corridor / Design Package: KT Dev - Hotels
System Name: Developed Condition

Computed: AMG Date: 3/29/2024
Checked: KMH Date: 3/29/2024

Sub-Basin Data			Composite C			Sub Area (Pavement)				Sub Area (Roof)				Sub Area(Lawns C Group soils)			
Basin ID	Description	Total Area (ac)	C_5	C_{100}	i	C_5	C_{100}	i	Area (ac)	C_5	C_{100}	i	Area (ac)	C_5	C_{100}	i	Area (ac)
A1	Everhome Suites Hotel	0.34	0.85	0.90	90.0	0.88	0.93	100	0.000	0.85	0.90	90	0.340	0.16	0.20	2	0.000
A2	NW Landscape Area	0.06	0.25	0.29	14.6	0.88	0.93	100	0.008	0.85	0.90	90	0.000	0.16	0.20	2	0.056
A2.1	NW Landscape Area	0.03	0.35	0.39	28.0	0.88	0.93	100	0.007	0.85	0.90	90	0.000	0.16	0.20	2	0.019
A3	SW Ramp Area	0.04	0.66	0.71	70.2	0.88	0.93	100	0.030	0.85	0.90	90	0.000	0.16	0.20	2	0.013
A4	SW Parking and Drive Aisle	0.10	0.79	0.84	87.6	0.88	0.93	100	0.083	0.85	0.90	90	0.000	0.16	0.20	2	0.012
A5	Parking Lot and SW Drive Aisle	0.13	0.82	0.86	91.2	0.88	0.93	100	0.122	0.85	0.90	90	0.000	0.16	0.20	2	0.012
A6	Parking Lot	0.97	0.85	0.90	96.3	0.88	0.93	100	0.933	0.85	0.90	90	0.000	0.16	0.20	2	0.037
BY-E	Towards Trail and Coal Creek	0.30	0.16	0.20	2.0	0.88	0.93	100	0.000	0.85	0.90	90	0.000	0.16	0.20	2	0.297
Improvements Composite		1.97	0.71	0.76	76.1	0.88	0.93	100	1.184	0.85	0.90	90	0.340	0.16	0.20	2	0.446
COMPOSITE ZONE LOT =		1.97	0.71	0.76	76.1												

Standard Form SF-1 . Time of Concentration

Corridor / Design Package: KT Dev - Hotels
System Name: Developed Condition

Computed: AMG Date: 3/29/2024
Checked: KMH Date: 3/29/2024

SUB-BASIN DATA				INITIAL/OVERLAND FLOW (t_i)			TRAVEL TIME (t_t) Type of Land Surface							Total	Tc CHECK (Urbanized basins)				FINAL Tc (min)
Basin ID	Description	C_5	Area (ac)	Length (ft)	Slope (ft/ft)	t_i (min)	Length (ft)	Slope (ft/ft)	Code	Description	Convey Coef (C_v)	V	t_t (min)	$t_c = t_i + t_t$ (min)	Urban (Yes /No)	Length (ft)	$T_{c\,max}$ (min)	$Tc_{max} > t_c$	
A1	Everhome Suites Hotel	0.85	0.34	100	0.02	3.6	0.0	0.02	6	Paved areas and shallow paved swales	20	2.828	0.00	3.59	Yes	100	0.56	Regional Tc	5.00
A2	NW Landscape Area	0.25	0.06	90	0.02	11.5	0.0	0.02	6	Paved areas and shallow paved swales	20	2.828	0.00	11.55	Yes	90	0.50	Regional Tc	11.55
A2.1	NW Landscape Area	0.35	0.03	90	0.02	10.2	0.0	0.02	6	Paved areas and shallow paved swales	20	2.828	0.00	10.20	Yes	90	0.50	Regional Tc	10.20
A3	SW Ramp Area	0.66	0.04	75	0.02	5.5	0.0	0.01	6	Paved areas and shallow paved swales	20	2	0.00	5.46	Yes	75	0.42	Regional Tc	5.46
A4	SW Parking and Drive Aisle	0.79	0.10	54	0.03	2.9	15.0	0.02	6	Paved areas and shallow paved swales	20	2.828	0.09	2.96	Yes	69	0.38	Regional Tc	5.00
A5	Parking Lot and SW Drive Aisle	0.82	0.13	192	0.03	5.0	0.0	0.01	6	Paved areas and shallow paved swales	20	2	0.00	4.95	Yes	192	1.07	Regional Tc	5.00
A6	Parking Lot	0.85	0.97	244	0.03	4.9	72.0	0.01	6	Paved areas and shallow paved swales	20	2	0.60	5.45	Yes	316	1.76	Regional Tc	5.45
BY-E	Towards Trail and Coal Creek	0.16	0.30	40	0.25	3.7	0.0	0.02	6	Paved areas and shallow paved swales	20	2.828	0.00	3.71	Yes	40	0.22	Regional Tc	5.00

Standard Form SF-2 . Storm Drainage System Design (Rational Method Procedure)

Corridor / Design Package: KT Dev - Hotels
System Name: Developed Condition

Computed: AMG Date: 3/29/2024
Checked: KMH Date: 3/29/2024

Design Storm: Proposed 5-yr P = 1.34 in

LOCATION		DESIGN POINT	DIRECT RUNOFF							TOTAL RUNOFF				STREET		PIPE			TRAVEL TIME			REMARKS
			AREA DESIGN	AREA (AC)	RUNOFF COEFF	t_c (MIN)	C.A. (AC)	IIN / HR	Q (CFS)	t_c (MIN)	SUM (C*A)(AC)	I(IN / HR)	Q(CFS)	SLOPE(%)	STREETFLOW (I	DESIGNFLOW (C	SLOPE(%)	PIPE SIZE(in)	LENGTH(FT)	VELOCITY(FPS)	t_t (MIN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
A2	NW Landscape Area		A2	0.06	0.25	11.55	0.016	3.42	0.06					--	--	--	--	--	--	--		
A2.1	NW Landscape Area		A2.1	0.03	0.35	10.20	0.009	3.60	0.03					--	--	--	--	--	--	--		
	A2 and A2.1	1								11.55	0.025	3.42	0.09									
A1	Everhome Suites Hotel		A1	0.34	0.85	5.00	0.289	4.55	1.31					--	--	--	--	--	--	--		
		2								11.55	0.314	3.42	1.07									
A3	SW Ramp Area		A3	0.04	0.66	5.46	0.028	4.44	0.13					--	--	--	--	--	--	--		
A4	SW Parking and Drive Aisle		A4	0.10	0.79	5.00	0.075	4.55	0.34					--	--	--	--	--	--	--		
		3								5.46	0.104	4.44	0.46									
A5	Parking Lot and SW Drive Aisle		A5	0.13	0.82	5.00	0.109	4.55	0.50					--	--	--	--	--	--	--		
		4								11.55	0.527	3.42	1.80									
A6	Parking Lot		A6	0.97	0.85	5.45	0.827	4.44	3.67					--	--	--	--	--	--	--		
		5								11.55	1.354	3.42	4.63									
BY-E	Towards Trail and Coal Creek		BY-E	0.30	0.16	5.00	0.048	4.55	0.22													
	BASIN TOTAL								6.26													

Design Storm: Proposed 100-yr P = 2.57 in

LOCATION		DESIGN POINT	DIRECT RUNOFF							TOTAL RUNOFF				STREET		PIPE			TRAVEL TIME			REMARKS
			AREA DESIGN	AREA (AC)	RUNOFF COEFF	t_c (MIN)	C.A. (AC)	IIN / HR	Q (CFS)	t_c (MIN)	SUM (C*A)(AC)	I(IN / HR)	Q(CFS)	SLOPE(%)	STREETFLOW (C	DESIGNFLOW (C	SLOPE(%)	PIPE SIZE(in)	LENGTH(FT)	VELOCITY(FPS)	t_t (MIN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
A2	NW Landscape Area		A2	0.06	0.29	11.55	0.02	6.56	0.12					--	--	--	--	--	--	--		
A2.1	NW Landscape Area		A2.1	0.03	0.39	10.20	0.01	6.90	0.07					--	--	--	--	--	--	--		
		1								11.55	0.029	3.42	0.10									
A1	Everhome Suites Hotel		A1	0.34	0.90	5.00	0.31	8.72	2.67					--	--	--	--	--	--	--		
		2								11.55	0.335	3.42	1.14									
A3	SW Ramp Area		A3	0.04	0.71	5.46	0.03	8.51	0.26					--	--	--	--	--	--	--		
A4	SW Parking and Drive Aisle		A4	0.10	0.84	5.00	0.08	8.72	0.70					--	--	--	--	--	--	--		
		3								5.46	0.110	4.44	0.49									
A5	Parking Lot and SW Drive Aisle		A5	0.13	0.86	5.00	0.12	8.72	1.01					--	--	--	--	--	--	--		
		4								11.55	0.561	3.42	1.92									
A6	Parking Lot		A6	0.97	0.90	5.45	0.88	8.51	7.45					--	--	--	--	--	--	--		
		5								11.55	1.437	3.42	4.91									
BY-E	Towards Trail and Coal Creek		BY-E	0.30	0.20	5.00	0.06	8.72	0.52					--	--	--	--	--	--	--		
	BASIN TOTAL								12.80													

(1) Basin Description linked to C-Value Sheet
(2) Basin Design Point
(3) Enter the Basin Name from C Value Sheet
(4) Basin Area linked to C-Value Sheet
(5) Composite C linked to C-Value Sheet
(6) Time of Concentration linked to C-Value Sheet
(7) =Column 4 x Column 5
(8) =28.5*P/(10+Column 6)^0.786
(9) =Column 7 x Column 8
(10) =Column 6 + Column 21
(11) Add the Basin Areas (7) to get the combined basin AC
(12) =28.5*P/(10+Column 10)^0.786
(13) Sum of Qs
(14) Additonal Street Overland Flow
(15) Additonal Street Overland Flow
(16) Design Pipe Flow
(17) Pipe Slope
(18) Pipe Size
(19) Additional Flow Length
(20) Velocity
(21) =Column 19 / Column 20 / 60

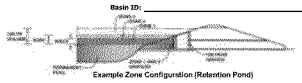
Appendix C – Hydraulic Computations

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.06 (July 2022)

Project: Everhome Suites - Superior

Basin ID:



Example Zone Configuration (Retention Pond)

Watershed Information

Selected BMP Type =	EDB	
Watershed Area =	1.07	acres
Watershed Length =	402	ft
Watershed Length to Centroid =	201	ft
Watershed Slope =	0.050	ft/ft
Watershed Imperviousness =	76.10%	percent
Percentage Hydrologic Soil Group A =	18.9%	percent
Percentage Hydrologic Soil Group B =	81.1%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent
Target WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depths =	Superior - Town Hall	

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

Optional User Overrides

Water Quality Capture Volume (WQCV) =	0.050	acre-feet	
Excess Urban Runoff Volume (EURV) =	0.171	acre-feet	
2-yr Runoff Volume (P1 = 0.8 in.) =	0.084	acre-feet	inches
5-yr Runoff Volume (P1 = 1.08 in.) =	0.120	acre-feet	inches
10-yr Runoff Volume (P1 = 1.34 in.) =	0.155	acre-feet	inches
25-yr Runoff Volume (P1 = 1.75 in.) =	0.222	acre-feet	inches
50-yr Runoff Volume (P1 = 2.1 in.) =	0.276	acre-feet	inches
100-yr Runoff Volume (P1 = 2.49 in.) =	0.341	acre-feet	inches
500-yr Runoff Volume (P1 = 3.53 in.) =	0.507	acre-feet	inches
Approximate 2-yr Detention Volume =	0.087	acre-feet	
Approximate 5-yr Detention Volume =	0.124	acre-feet	
Approximate 10-yr Detention Volume =	0.163	acre-feet	
Approximate 25-yr Detention Volume =	0.203	acre-feet	
Approximate 50-yr Detention Volume =	0.228	acre-feet	
Approximate 100-yr Detention Volume =	0.257	acre-feet	

Define Zones and Basin Geometry

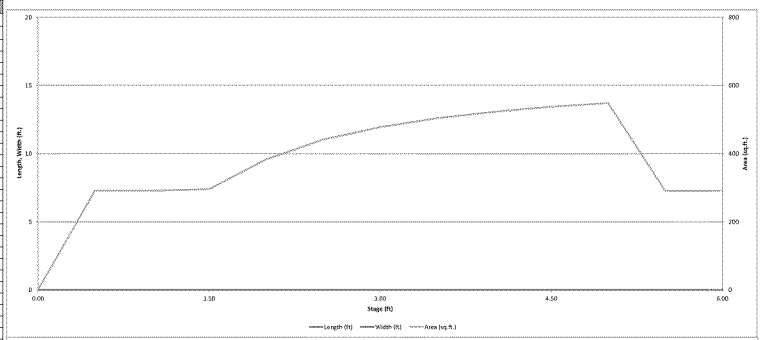
Zone 1 Volume (WQCV) =	0.050	acre-feet
Select Zone 2 Storage Volume (Optional) =		acre-feet
Select Zone 3 Storage Volume (Optional) =		acre-feet
Total Detention Basin Volume =	0.050	acre-feet
Initial Surcharge Volume (ISV) =	user	ft^3
Initial Surcharge Depth (ISD) =	user	ft
Total Available Detention Depth (H_{total}) =	user	ft
Depth of Trickle Channel (H_{TC}) =	user	ft
Slope of Trickle Channel (S_{TC}) =	user	ft/ft
Slopes of Main Basin Sides (S_{main}) =	user	H:V
Basin Length-to-Width Ratio ($R_{L/W}$) =	user	

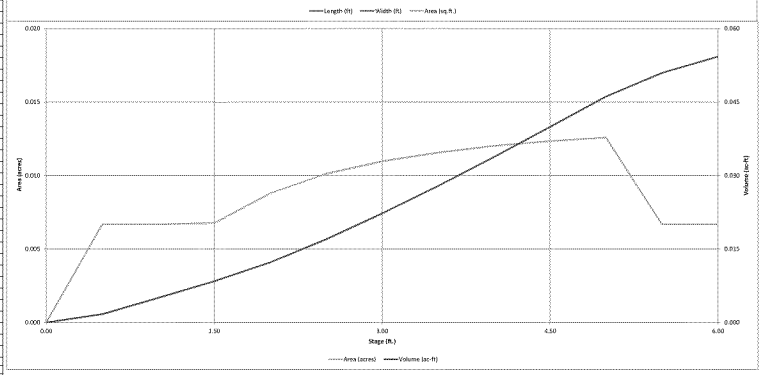
Total detention volume is less than 100-year volume.

Initial Surcharge Area (A_{ISV}) =	user	ft^2
Surcharge Volume Length (L_{ISV}) =	user	ft
Surcharge Volume Width (W_{ISV}) =	user	ft
Depth of Basin Floor (H_{FLOOR}) =	user	ft
Length of Basin Floor (L_{FLOOR}) =	user	ft
Width of Basin Floor (W_{FLOOR}) =	user	ft
Area of Basin Floor (A_{FLOOR}) =	user	ft^2
Volume of Basin Floor (V_{FLOOR}) =	user	ft^3
Depth of Main Basin (H_{MAIN}) =	user	ft
Length of Main Basin (L_{MAIN}) =	user	ft
Width of Main Basin (W_{MAIN}) =	user	ft
Area of Main Basin (A_{MAIN}) =	user	ft^2
Volume of Main Basin (V_{MAIN}) =	user	ft^3
Calculated Total Basin Volume (V_{total}) =	user	acre-feet

Depth Increment = 0.50 ft

Stage - Storage Description	Stage (ft)	Optional Override Stage (ft)	Length (ft)	Width (ft)	Area (ft^2)	Optional Override Area (ft^2)	Area (acre)	Volume (ft^3)	Volume (ac-ft)
Top of Micropool	--	0.00	--	--	--	0	0.000		
5462.50	--	0.50	--	--	--	291	0.007	73	0.002
5463.00	--	1.00	--	--	--	291	0.007	218	0.005
5463.50	--	1.50	--	--	--	295	0.007	365	0.008
5464.00	--	2.00	--	--	--	382	0.009	534	0.012
5464.50	--	2.50	--	--	--	441	0.010	740	0.017
5465.00	--	3.00	--	--	--	477	0.011	969	0.022
5465.50	--	3.50	--	--	--	503	0.012	1,214	0.028
5466.00	--	4.00	--	--	--	523	0.012	1,471	0.034
WQ Elevation	--	4.50	--	--	--	537	0.012	1,736	0.040
5467.00	--	5.00	--	--	--	548	0.013	2,007	0.046
5467.50	--	5.50	--	--	--	291	0.007	2,217	0.051
5468.00	--	6.00	--	--	--	291	0.007	2,362	0.054





DETENTION BASIN STAGE-STORAGE TABLE BUILDER

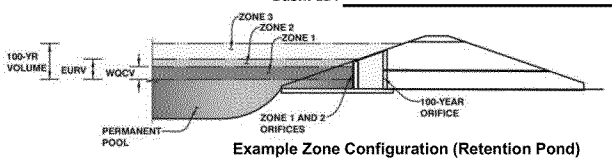
MHFD-Detention, Version 4.06 (July 2022)

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)

Project: **Everhome Suites - Superior**

Basin ID:



Example Zone Configuration (Retention Pond)

	Estimated Stage (ft)	Estimated Volume (ac-ft)	Outlet Type
Zone 1 (WQCV)	5.40	0.050	Orifice Plate
Zone 2			
Zone 3			
Total (all zones)		0.050	

User Input: Orifice at Underdrain Outlet (typically used to drain WQCV in a Filtration BMP)

Underdrain Orifice Invert Depth =		ft (distance below the filtration media surface)	Underdrain Orifice Area =		ft^2
Underdrain Orifice Diameter =		inches	Underdrain Orifice Centroid =		feet

Calculated Parameters for Underdrain

User Input: Orifice Plate with one or more orifices or Elliptical Slot Weir (typically used to drain WQCV and/or EURV in a sedimentation BMP)

Centroid of Lowest Orifice =	0.00	ft (relative to basin bottom at Stage = 0 ft)	WQ Orifice Area per Row =	1.389E-03	ft^2
Depth at top of Zone using Orifice Plate =	5.81	ft (relative to basin bottom at Stage = 0 ft)	Elliptical Half-Width =	N/A	feet
Orifice Plate: Orifice Vertical Spacing =	4.00	inches	Elliptical Slot Centroid =	N/A	feet
Orifice Plate: Orifice Area per Row =	0.20	sq. inches (diameter = 1/2 inch)	Elliptical Slot Area =	N/A	ft^2

Calculated Parameters for Plate

User Input: Stage and Total Area of Each Orifice Row (numbered from lowest to highest)

	Row 1 (required)	Row 2 (optional)	Row 3 (optional)	Row 4 (optional)	Row 5 (optional)	Row 6 (optional)	Row 7 (optional)	Row 8 (optional)
Stage of Orifice Centroid (ft)	0.00	0.30	0.60	0.90	1.20	1.50	1.80	2.10
Orifice Area (sq. inches)	0.20	0.20	0.20					

	Row 9 (optional)	Row 10 (optional)	Row 11 (optional)	Row 12 (optional)	Row 13 (optional)	Row 14 (optional)	Row 15 (optional)	Row 16 (optional)
Stage of Orifice Centroid (ft)	2.40	2.70	3.00	3.30	3.60	3.90	4.20	4.50
Orifice Area (sq. inches)								

User Input: Vertical Orifice (Circular or Rectangular)

	Not Selected	Not Selected			Not Selected	Not Selected	
Invert of Vertical Orifice =			ft (relative to basin bottom at Stage = 0 ft)	Vertical Orifice Area =			ft^2
Depth at top of Zone using Vertical Orifice =			ft (relative to basin bottom at Stage = 0 ft)	Vertical Orifice Centroid =			feet
Vertical Orifice Diameter =			inches				

Calculated Parameters for Vertical Orifice

User Input: Overflow Weir (Dropbox with Flat or Sloped Grate and Outlet Pipe OR Rectangular/Trapezoidal Weir and No Outlet Pipe)

	Not Selected	Not Selected			Not Selected	Not Selected	
Overflow Weir Front Edge Height, Ho =			ft (relative to basin bottom at Stage = 0 ft)	Height of Grate Upper Edge, H_t =			feet
Overflow Weir Front Edge Length =			feet	Overflow Weir Slope Length =			feet
Overflow Weir Grate Slope =			H:V	Grate Open Area / 100-yr Orifice Area =			
Horiz. Length of Weir Sides =			feet	Overflow Grate Open Area w/o Debris =			ft^2
Overflow Grate Type =				Overflow Grate Open Area w/ Debris =			ft^2
Debris Clogging % =			%				

Calculated Parameters for Overflow Weir

User Input: Outlet Pipe w/ Flow Restriction Plate (Circular Orifice, Restrictor Plate, or Rectangular Orifice)

	Not Selected	Not Selected			Not Selected	Not Selected	
Depth to Invert of Outlet Pipe =			ft (distance below basin bottom at Stage = 0 ft)	Outlet Orifice Area =			ft^2
Circular Orifice Diameter =			inches	Outlet Orifice Centroid =			feet
				Half-Central Angle of Restrictor Plate on Pipe =	N/A	N/A	radians

Calculated Parameters for Outlet Pipe w/ Flow Restriction Plate

User Input: Emergency Spillway (Rectangular or Trapezoidal)

Spillway Invert Stage=		ft (relative to basin bottom at Stage = 0 ft)	Spillway Design Flow Depth=		feet
Spillway Crest Length =		feet	Stage at Top of Freeboard =		feet
Spillway End Slopes =		H:V	Basin Area at Top of Freeboard =		acres
Freeboard above Max Water Surface =		feet	Basin Volume at Top of Freeboard =		acre-ft

Calculated Parameters for Spillway

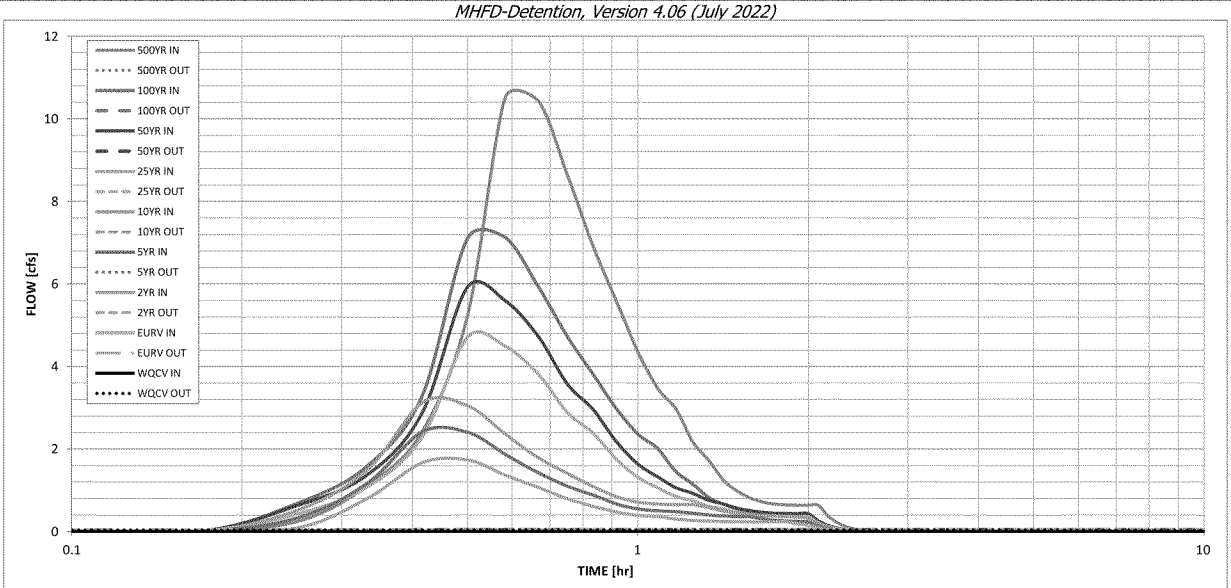
Routed Hydrograph Results

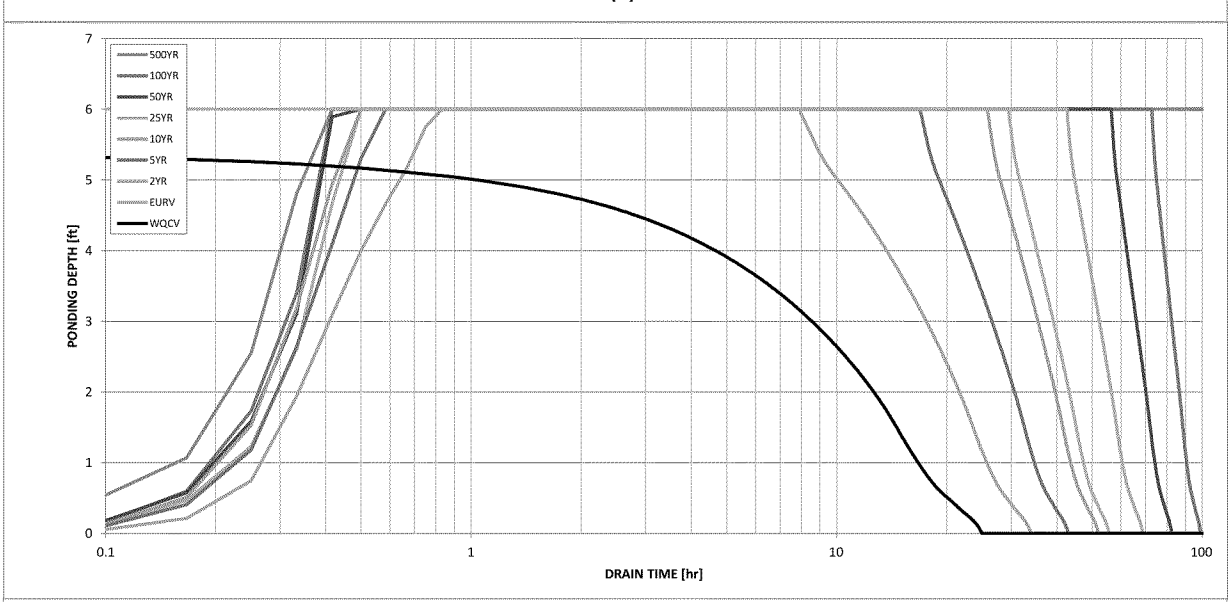
The user can override the default CUHP hydrographs and runoff volumes by entering new values in the Inflow Hydrographs table (Columns W through AF).

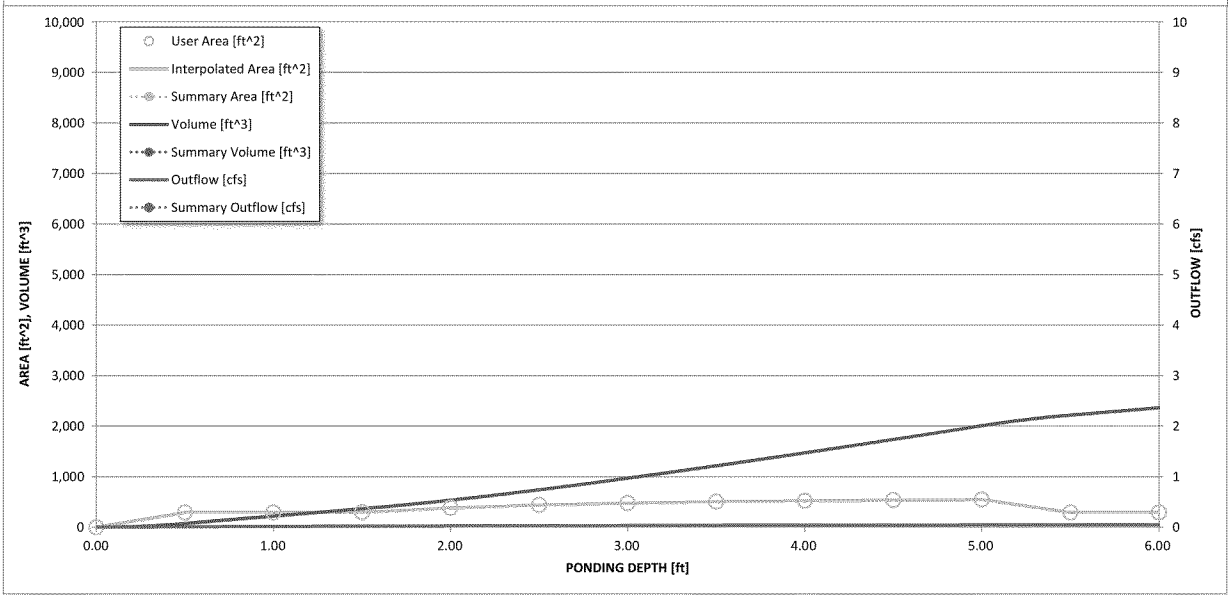
Design Storm Return Period =	WQCV	EURV	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	500 Year
One-Hour Rainfall Depth (in) =	N/A	N/A	0.80	1.08	1.34	1.75	2.10	2.49	3.53
CUHP Runoff Volume (acre-ft) =	0.050	0.171	0.084	0.120	0.155	0.222	0.276	0.341	0.507
Inflow Hydrograph Volume (acre-ft) =	N/A	N/A	0.084	0.120	0.155	0.222	0.276	0.341	0.507
CUHP Predevelopment Peak Q (cfs) =	N/A	N/A	0.0	0.0	0.2	1.3	2.0	2.9	4.9
OPTIONAL Override Predevelopment Peak Q (cfs) =	N/A	N/A							
Predevelopment Unit Peak Flow, q (cfs/acre) =	N/A	N/A	0.01	0.02	0.11	0.65	1.01	1.45	2.48
Peak Inflow Q (cfs) =	N/A	N/A	1.7	2.4	3.1	4.7	5.9	7.1	10.5
Peak Outflow Q (cfs) =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ratio Peak Outflow to Predevelopment Q =	N/A	N/A	N/A	1.5	0.2	0.0	0.0	0.0	0.0
Structure Controlling Flow =	Plate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Velocity through Grate 1 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Velocity through Grate 2 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Time to Drain 97% of Inflow Volume (hours) =	20	47	28	36	44	59	72	88	>120
Time to Drain 99% of Inflow Volume (hours) =	23	51	31	39	47	63	76	92	>120
Maximum Ponding Depth (ft) =	5.39	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Area at Maximum Ponding Depth (acres) =	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maximum Volume Stored (acre-ft) =	0.050	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)







S-A-V-D Chart Axis Override	X-axis	Left Y-Axis	Right Y-Axis
minimum bound			
maximum bound			

Version 4.05 Released March 2017

INLET MANAGEMENT

Worksheet Protected

INLET NAME	Inlet A4	Inlet A5
Site Type (Urban or Rural)	URBAN	URBAN
Inlet Application (Street or Area)	STREET	STREET
Hydraulic Condition	In Sump	In Sump
Inlet Type	CDOT/Denver 13 Combination	CDOT/Denver 13 Valley Grate

USER-DEFINED INPUT

User-Defined Design Flows

Minor Q_{Known} (cfs)	0.3	0.5
Major Q_{Known} (cfs)	0.7	1.0

Bypass (Carry-Over) Flow from Upstream

Receive Bypass Flow from:	No Bypass Flow Received	No Bypass Flow Received
Minor Bypass Flow Received, Q_b (cfs)	0.0	0.0
Major Bypass Flow Received, Q_b (cfs)	0.0	0.0

Watershed Characteristics

Subcatchment Area (acres)		
Percent Impervious		
NRCS Soil Type		

Watershed Profile

Overland Slope (ft/ft)		
Overland Length (ft)		
Channel Slope (ft/ft)		
Channel Length (ft)		

Minor Storm Rainfall Input

Design Storm Return Period, T_r (years)		
One-Hour Precipitation, P_1 (inches)		

Major Storm Rainfall Input

Design Storm Return Period, T_r (years)		
One-Hour Precipitation, P_1 (inches)		

CALCULATED OUTPUT

Minor Total Design Peak Flow, Q (cfs)	**0.3**	**0.5**
Major Total Design Peak Flow, Q (cfs)	**0.7**	**1.0**
Minor Flow Bypassed Downstream, Q_b (cfs)	N/A	N/A
Major Flow Bypassed Downstream, Q_b (cfs)	N/A	N/A

Minor Storm (Calculated) Analysis of Flow Time

C	N/A	N/A
C_5	N/A	N/A
Overland Flow Velocity, Vi	N/A	N/A
Channel Flow Velocity, Vt	N/A	N/A
Overland Flow Time, Ti	N/A	N/A
Channel Travel Time, Tt	N/A	N/A
Calculated Time of Concentration, T_c	N/A	N/A
Regional T_c	N/A	N/A
Recommended T_c	N/A	N/A
T_c selected by User	N/A	N/A
Design Rainfall Intensity, I	N/A	N/A
Calculated Local Peak Flow, Q_p	N/A	N/A

Major Storm (Calculated) Analysis of Flow Time

C	N/A	N/A
C_5	N/A	N/A
Overland Flow Velocity, Vi	N/A	N/A
Channel Flow Velocity, Vt	N/A	N/A
Overland Flow Time, Ti	N/A	N/A
Channel Travel Time, Tt	N/A	N/A
Calculated Time of Concentration, T_c	N/A	N/A
Regional T_c	N/A	N/A
Recommended T_c	N/A	N/A
T_c selected by User	N/A	N/A
Design Rainfall Intensity, I	N/A	N/A
Calculated Local Peak Flow, Q_p	N/A	N/A

Version 4.05 Released March 2017

INLET MANAGEMENT

Worksheet Protected

INLET NAME	Inlet A6
Site Type (Urban or Rural)	URBAN
Inlet Application (Street or Area)	STREET
Hydraulic Condition	In Sump
Inlet Type	CDOT/Denver 13 Combination

USER-DEFINED INPUT

User-Defined Design Flows

Minor Q_{Known} (cfs)	3.7
Major Q_{Known} (cfs)	7.5

Bypass (Carry-Over) Flow from Upstream

Receive Bypass Flow from:	No Bypass Flow Received
Minor Bypass Flow Received, Q_b (cfs)	0.0
Major Bypass Flow Received, Q_b (cfs)	0.0

Watershed Characteristics

Subcatchment Area (acres)	0.97
Percent Impervious	100
NRCS Soil Type	B

Watershed Profile

Overland Slope (ft/ft)	0.300
Overland Length (ft)	244
Channel Slope (ft/ft)	0.200
Channel Length (ft)	72

Minor Storm Rainfall Input

Design Storm Return Period, T_r (years)	
One-Hour Precipitation, P_1 (inches)	

Major Storm Rainfall Input

Design Storm Return Period, T_r (years)	
One-Hour Precipitation, P_1 (inches)	

CALCULATED OUTPUT

Minor Total Design Peak Flow, Q (cfs)	**3.7**
Major Total Design Peak Flow, Q (cfs)	**7.5**
Minor Flow Bypassed Downstream, Q_b (cfs)	N/A
Major Flow Bypassed Downstream, Q_b (cfs)	N/A

Minor Storm (Calculated) Analysis of Flow Tir

C	N/A
C_5	N/A
Overland Flow Velocity, Vi	N/A
Channel Flow Velocity, Vt	N/A
Overland Flow Time, Ti	N/A
Channel Travel Time, Tt	N/A
Calculated Time of Concentration, T_c	N/A
Regional T_c	N/A
Recommended T_c	N/A
T_c selected by User	N/A
Design Rainfall Intensity, I	N/A
Calculated Local Peak Flow, Q_p	N/A

Major Storm (Calculated) Analysis of Flow Tir

C	N/A
C_5	N/A
Overland Flow Velocity, Vi	N/A
Channel Flow Velocity, Vt	N/A
Overland Flow Time, Ti	N/A
Channel Travel Time, Tt	N/A
Calculated Time of Concentration, T_c	N/A
Regional T_c	N/A
Recommended T_c	N/A
T_c selected by User	N/A
Design Rainfall Intensity, I	N/A
Calculated Local Peak Flow, Q_p	N/A

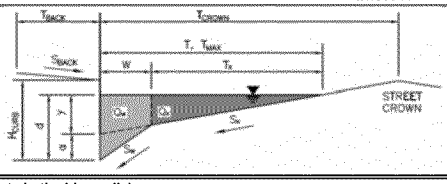
Version 4.05 Released March 2017

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: Enter Your Project Name Here

Inlet ID: Inlet A4



Gutter Geometry (Enter data in the blue cells)

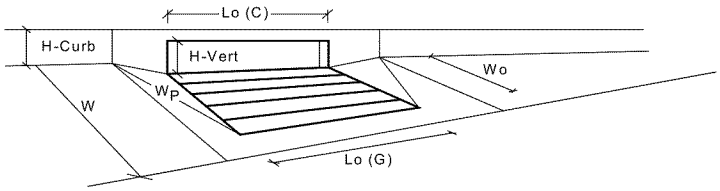
Maximum Allowable Width for Spread Behind Curb	T_{BACK} =	0.5	ft
Side Slope Behind Curb (leave blank for no conveyance credit behind curb)	S_{BACK} =	0.000	ft/ft
Manning's Roughness Behind Curb (typically between 0.012 and 0.020)	n_{BACK} =	0.013	
Height of Curb at Gutter Flow Line	H_{CURB} =	6.00	inches
Distance from Curb Face to Street Crown	T_{CROWN} =	30.0	ft
Gutter Width	W =	2.00	ft
Street Transverse Slope	S_X =	3.000	ft/ft
Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)	S_W =	0.083	ft/ft
Street Longitudinal Slope - Enter 0 for sump condition	S_O =	0.000	ft/ft
Manning's Roughness for Street Section (typically between 0.012 and 0.020)	n_{STREET} =	0.013	

		Minor Storm	Major Storm	
Max. Allowable Spread for Minor & Major Storm	T_{MAX} =	30.0	30.0	ft
Max. Allowable Depth at Gutter Flowline for Minor & Major Storm	d_{MAX} =	6.0	6.0	inches
Check boxes are not applicable in SUMP conditions		☐	☐	

		Minor Storm	Major Storm	
MINOR STORM Allowable Capacity is based on Depth Criterion				
MAJOR STORM Allowable Capacity is based on Depth Criterion	**Q_{allow} =**	**SUMP**	**SUMP**	**cfs**

INLET IN A SUMP OR SAG LOCATION

Version 4.05 Released March 2017



Design Information (Input)	CDOT/Denver 13 Combination		MINOR	MAJOR	
Type of Inlet		Type =	CDOT/Denver 13 Combination		
Local Depression (additional to continuous gutter depression 'a' from above)		a_{local} =	2.00	2.00	inches
Number of Unit Inlets (Grate or Curb Opening)		No =	1	1	
Water Depth at Flowline (outside of local depression)		Ponding Depth =	6.0	6.0	inches
Grate Information			MINOR	MAJOR	☐ Override Depths
Length of a Unit Grate		L_o (G) =	3.00	3.00	feet
Width of a Unit Grate		W_o =	1.73	1.73	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)		A_{ratio} =	0.43	0.43	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)		C_f (G) =	0.50	0.50	
Grate Weir Coefficient (typical value 2.15 - 3.60)		C_w (G) =	3.30	3.30	
Grate Orifice Coefficient (typical value 0.60 - 0.80)		C_o (G) =	0.60	0.60	
Curb Opening Information			MINOR	MAJOR	
Length of a Unit Curb Opening		L_o (C) =	3.00	3.00	feet
Height of Vertical Curb Opening in Inches		H_{vert} =	6.50	6.50	inches
Height of Curb Orifice Throat in Inches		H_{throat} =	5.25	5.25	inches
Angle of Throat (see USDCM Figure ST-5)		Theta =	0.00	0.00	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)		W_p =	2.00	2.00	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)		C_f (C) =	0.10	0.10	
Curb Opening Weir Coefficient (typical value 2.3-3.7)		C_w (C) =	3.70	3.70	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)		C_o (C) =	0.66	0.66	
Low Head Performance Reduction (Calculated)			MINOR	MAJOR	
Depth for Grate Midwidth		d_{Grate} =	0.523	0.523	ft
Depth for Curb Opening Weir Equation		d_{Curb} =	0.33	0.33	ft
Combination Inlet Performance Reduction Factor for Long Inlets		$RF_{Combination}$ =	0.94	0.94	
Curb Opening Performance Reduction Factor for Long Inlets		RF_{Curb} =	1.00	1.00	
Grated Inlet Performance Reduction Factor for Long Inlets		RF_{Grate} =	0.94	0.94	
			MINOR	MAJOR	
Total Inlet Interception Capacity (assumes clogged condition)		**Q_a =**	**3.6**	**3.6**	**cfs**
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)		$Q_{PEAK\ REQUIRED}$ =	0.3	0.7	cfs

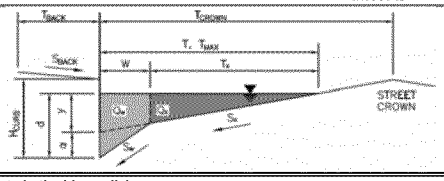
Version 4.05 Released March 2017

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: Enter Your Project Name Here

Inlet ID: Inlet A5



Gutter Geometry (Enter data in the blue cells)

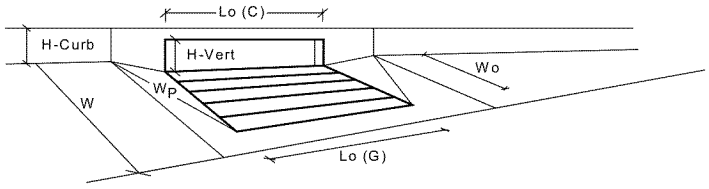
Maximum Allowable Width for Spread Behind Curb	T_{BACK} =	0.5	ft
Side Slope Behind Curb (leave blank for no conveyance credit behind curb)	S_{BACK} =	0.000	ft/ft
Manning's Roughness Behind Curb (typically between 0.012 and 0.020)	n_{BACK} =	0.013	
Height of Curb at Gutter Flow Line	H_{CURB} =	6.00	inches
Distance from Curb Face to Street Crown	T_{CROWN} =	30.0	ft
Gutter Width	W =	2.00	ft
Street Transverse Slope	S_X =	3.000	ft/ft
Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)	S_W =	0.083	ft/ft
Street Longitudinal Slope - Enter 0 for sump condition	S_O =	0.000	ft/ft
Manning's Roughness for Street Section (typically between 0.012 and 0.020)	n_{STREET} =	0.013	

		Minor Storm	Major Storm	
Max. Allowable Spread for Minor & Major Storm	T_{MAX} =	30.0	30.0	ft
Max. Allowable Depth at Gutter Flowline for Minor & Major Storm	d_{MAX} =	6.0	6.0	inches
Check boxes are not applicable in SUMP conditions		☐	☐	

		Minor Storm	Major Storm	
MINOR STORM Allowable Capacity is based on Depth Criterion				
MAJOR STORM Allowable Capacity is based on Depth Criterion	**Q_{allow} =**	**SUMP**	**SUMP**	**cfs**

INLET IN A SUMP OR SAG LOCATION

Version 4.05 Released March 2017



Design Information (Input)	CDOT/Denver 13 Valley Grate	MINOR	MAJOR	
Type of Inlet	Type =	CDOT/Denver 13 Valley Grate		
Local Depression (additional to continuous gutter depression 'a' from above)	a_{local} =	2.00	2.00	inches
Number of Unit Inlets (Grate or Curb Opening)	No =	1	1	
Water Depth at Flowline (outside of local depression)	Ponding Depth =	6.0	6.0	inches
Grate Information		MINOR	MAJOR	☐ Override Depths
Length of a Unit Grate	L_o (G) =	3.00	3.00	feet
Width of a Unit Grate	W_o =	1.73	1.73	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)	A_{ratio} =	0.43	0.43	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)	C_f (G) =	0.50	0.50	
Grate Weir Coefficient (typical value 2.15 - 3.60)	C_w (G) =	3.30	3.30	
Grate Orifice Coefficient (typical value 0.60 - 0.80)	C_o (G) =	0.60	0.60	
Curb Opening Information		MINOR	MAJOR	
Length of a Unit Curb Opening	L_o (C) =	N/A	N/A	feet
Height of Vertical Curb Opening in Inches	H_{vert} =	N/A	N/A	inches
Height of Curb Orifice Throat in Inches	H_{throat} =	N/A	N/A	inches
Angle of Throat (see USDCM Figure ST-5)	Theta =	N/A	N/A	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)	W_p =	N/A	N/A	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)	C_f (C) =	N/A	N/A	
Curb Opening Weir Coefficient (typical value 2.3-3.7)	C_w (C) =	N/A	N/A	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)	C_o (C) =	N/A	N/A	
Grate Flow Analysis (Calculated)		MINOR	MAJOR	
Clogging Coefficient for Multiple Units	Coef =	1.00	1.00	
Clogging Factor for Multiple Units	Clog =	0.50	0.50	
Grate Capacity as a Weir (based on Modified HEC22 Method)		MINOR	MAJOR	
Interception without Clogging	Q_{wi} =	5.3	5.3	cfs
Interception with Clogging	Q_{wa} =	2.6	2.6	cfs
Grate Capacity as a Orifice (based on Modified HEC22 Method)		MINOR	MAJOR	
Interception without Clogging	Q_{oi} =	7.8	7.8	cfs
Interception with Clogging	Q_{oa} =	3.9	3.9	cfs
Grate Capacity as Mixed Flow		MINOR	MAJOR	
Interception without Clogging	Q_{mi} =	6.0	6.0	cfs
Interception with Clogging	Q_{ma} =	3.0	3.0	cfs
Resulting Grate Capacity (assumes clogged condition)	**Q_{Grate} =**	**2.6**	**2.6**	**cfs**
Curb Opening Flow Analysis (Calculated)		MINOR	MAJOR	
Clogging Coefficient for Multiple Units	Coef =	N/A	N/A	
Clogging Factor for Multiple Units	Clog =	N/A	N/A	
Curb Opening as a Weir (based on Modified HEC22 Method)		MINOR	MAJOR	
Interception without Clogging	Q_{wi} =	N/A	N/A	cfs
Interception with Clogging	Q_{wa} =	N/A	N/A	cfs
Curb Opening as an Orifice (based on Modified HEC22 Method)		MINOR	MAJOR	
Interception without Clogging	Q_{oi} =	N/A	N/A	cfs
Interception with Clogging	Q_{oa} =	N/A	N/A	cfs
Curb Opening Capacity as Mixed Flow		MINOR	MAJOR	
Interception without Clogging	Q_{mi} =	N/A	N/A	cfs
Interception with Clogging	Q_{ma} =	N/A	N/A	cfs
Resulting Curb Opening Capacity (assumes clogged condition)	**Q_{Curb} =**	**N/A**	**N/A**	**cfs**
Resultant Street Conditions		MINOR	MAJOR	
Total Inlet Length	L =	3.00	3.00	feet
Resultant Street Flow Spread (based on street geometry from above)	T =	2.1	2.1	ft
Resultant Flow Depth at Street Crown	d_{CROWN} =	0.0	0.0	inches
Low Head Performance Reduction (Calculated)		MINOR	MAJOR	
Depth for Grate Midwidth	d_{Grate} =	0.523	0.523	ft
Depth for Curb Opening Weir Equation	d_{Curb} =	N/A	N/A	ft
Combination Inlet Performance Reduction Factor for Long Inlets	$RF_{Combination}$ =	N/A	N/A	
Curb Opening Performance Reduction Factor for Long Inlets	RF_{Curb} =	N/A	N/A	
Grated Inlet Performance Reduction Factor for Long Inlets	RF_{Grate} =	0.94	0.94	
		MINOR	MAJOR	
Total Inlet Interception Capacity (assumes clogged condition)	**Q_a =**	**2.6**	**2.6**	**cfs**
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)	$Q_{PEAK\ REQUIRED}$ =	0.5	1.0	cfs

Warning 5: The width of unit is greater than the gutter width.

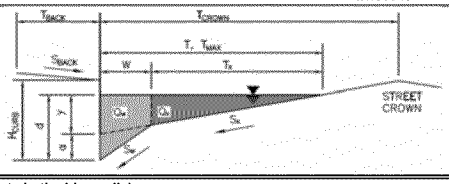
Version 4.05 Released March 2017

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: Enter Your Project Name Here

Inlet ID: Inlet A6



Gutter Geometry (Enter data in the blue cells)

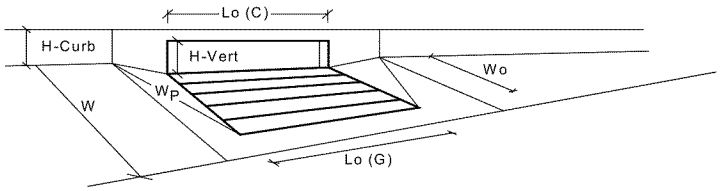
Maximum Allowable Width for Spread Behind Curb	T_{BACK} =	0.5	ft
Side Slope Behind Curb (leave blank for no conveyance credit behind curb)	S_{BACK} =	0.000	ft/ft
Manning's Roughness Behind Curb (typically between 0.012 and 0.020)	n_{BACK} =	0.013	
Height of Curb at Gutter Flow Line	H_{CURB} =	6.00	inches
Distance from Curb Face to Street Crown	T_{CROWN} =	30.0	ft
Gutter Width	W =	2.00	ft
Street Transverse Slope	S_X =	3.000	ft/ft
Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)	S_W =	0.083	ft/ft
Street Longitudinal Slope - Enter 0 for sump condition	S_O =	0.000	ft/ft
Manning's Roughness for Street Section (typically between 0.012 and 0.020)	n_{STREET} =	0.013	

		Minor Storm	Major Storm	
Max. Allowable Spread for Minor & Major Storm	T_{MAX} =	30.0	30.0	ft
Max. Allowable Depth at Gutter Flowline for Minor & Major Storm	d_{MAX} =	6.0	6.0	inches
Check boxes are not applicable in SUMP conditions		☐	☐	

		Minor Storm	Major Storm	
MINOR STORM Allowable Capacity is based on Depth Criterion				
MAJOR STORM Allowable Capacity is based on Depth Criterion	**Q_{allow} =**	**SUMP**	**SUMP**	**cfs**

INLET IN A SUMP OR SAG LOCATION

Version 4.05 Released March 2017



Design Information (Input)	CDOT/Denver 13 Combination		MINOR	MAJOR	
Type of Inlet		Type =	CDOT/Denver 13 Combination		
Local Depression (additional to continuous gutter depression 'a' from above)		a_{local} =	2.00	2.00	inches
Number of Unit Inlets (Grate or Curb Opening)		No =	4	4	
Water Depth at Flowline (outside of local depression)		Ponding Depth =	6.0	6.0	inches
Grate Information			MINOR	MAJOR	Override Depths
Length of a Unit Grate		L_o (G) =	3.00	3.00	feet
Width of a Unit Grate		W_o =	1.73	1.73	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)		A_{ratio} =	0.43	0.43	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)		C_f (G) =	0.50	0.50	
Grate Weir Coefficient (typical value 2.15 - 3.60)		C_w (G) =	3.30	3.30	
Grate Orifice Coefficient (typical value 0.60 - 0.80)		C_o (G) =	0.60	0.60	
Curb Opening Information			MINOR	MAJOR	
Length of a Unit Curb Opening		L_o (C) =	3.00	3.00	feet
Height of Vertical Curb Opening in Inches		H_{vert} =	6.50	6.50	inches
Height of Curb Orifice Throat in Inches		H_{throat} =	5.25	5.25	inches
Angle of Throat (see USDCM Figure ST-5)		Theta =	0.00	0.00	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)		W_p =	2.00	2.00	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)		C_f (C) =	0.10	0.10	
Curb Opening Weir Coefficient (typical value 2.3-3.7)		C_w (C) =	3.70	3.70	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)		C_o (C) =	0.66	0.66	
Low Head Performance Reduction (Calculated)			MINOR	MAJOR	
Depth for Grate Midwidth		d_{Grate} =	0.523	0.523	ft
Depth for Curb Opening Weir Equation		d_{Curb} =	0.33	0.33	ft
Combination Inlet Performance Reduction Factor for Long Inlets		$RF_{Combination}$ =	0.57	0.57	
Curb Opening Performance Reduction Factor for Long Inlets		RF_{Curb} =	0.87	0.87	
Grated Inlet Performance Reduction Factor for Long Inlets		RF_{Grate} =	0.57	0.57	
			MINOR	MAJOR	
Total Inlet Interception Capacity (assumes clogged condition)		**Q_a =**	**8.6**	**8.6**	**cfs**
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)		$Q_{PEAK\ REQUIRED}$ =	3.7	7.5	cfs

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Mar 29 2024

Outfall (18in RCP)

Circular

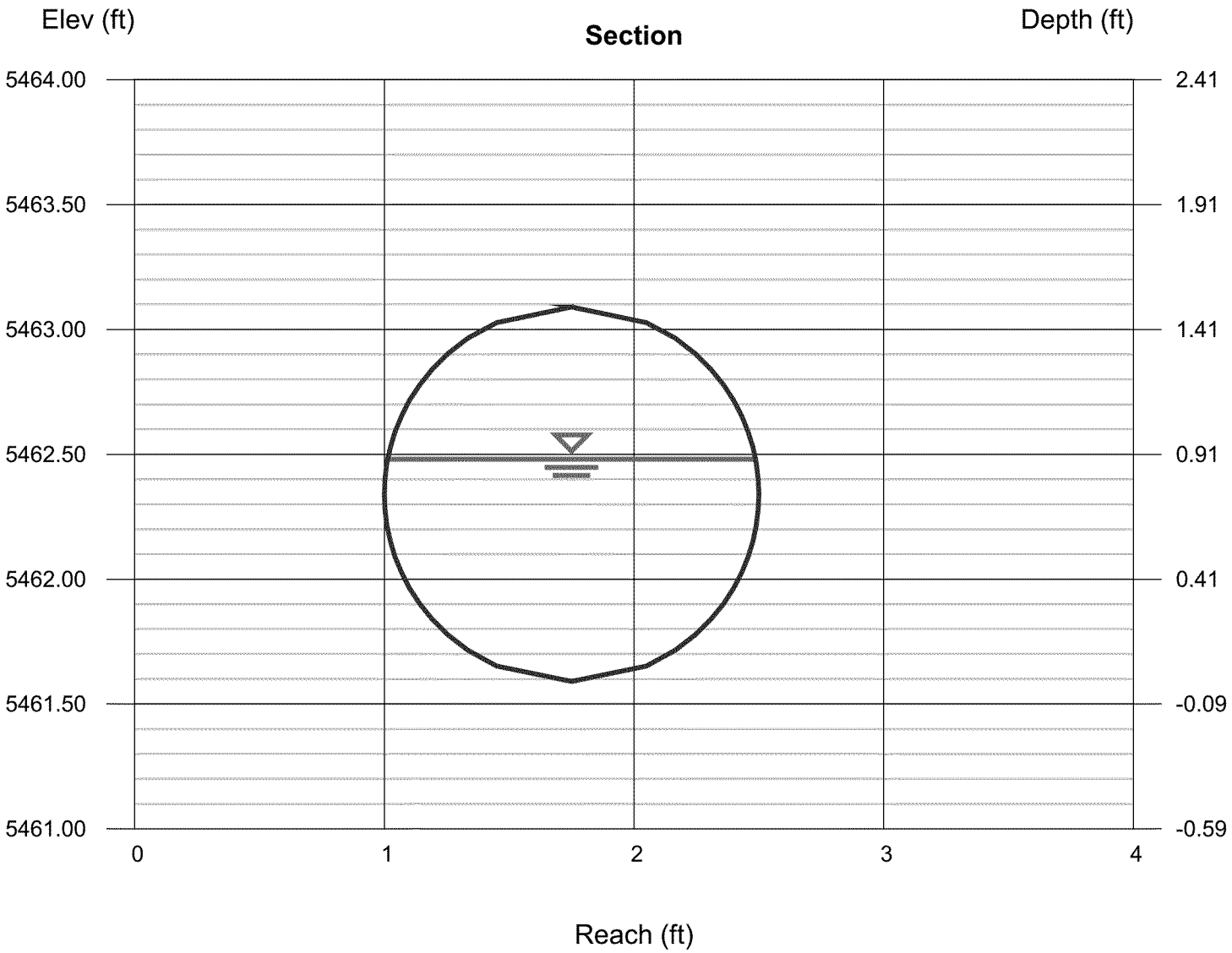
Diameter (ft)	= 1.50
Invert Elev (ft)	= 5461.59
Slope (%)	= 3.40
N-Value	= 0.013

Calculations

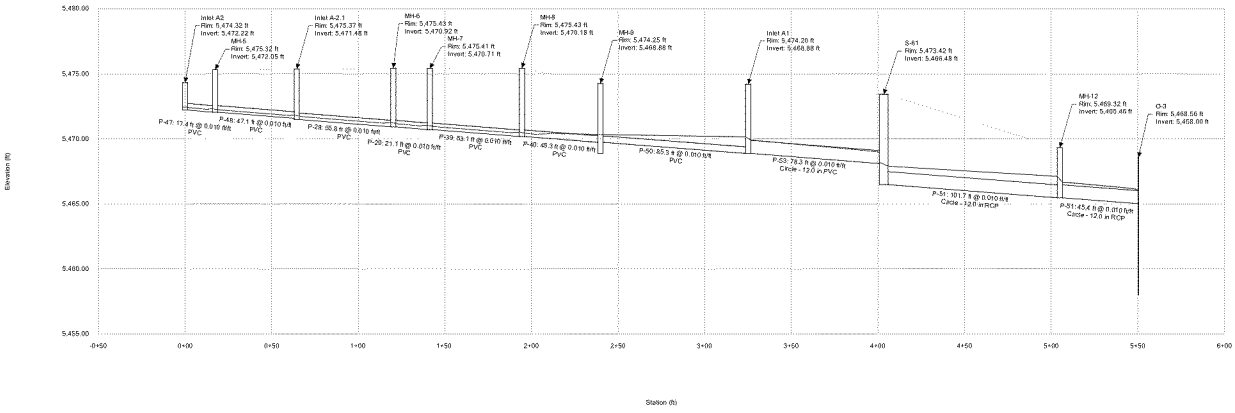
Compute by:	Known Q
Known Q (cfs)	= 12.80

Highlighted

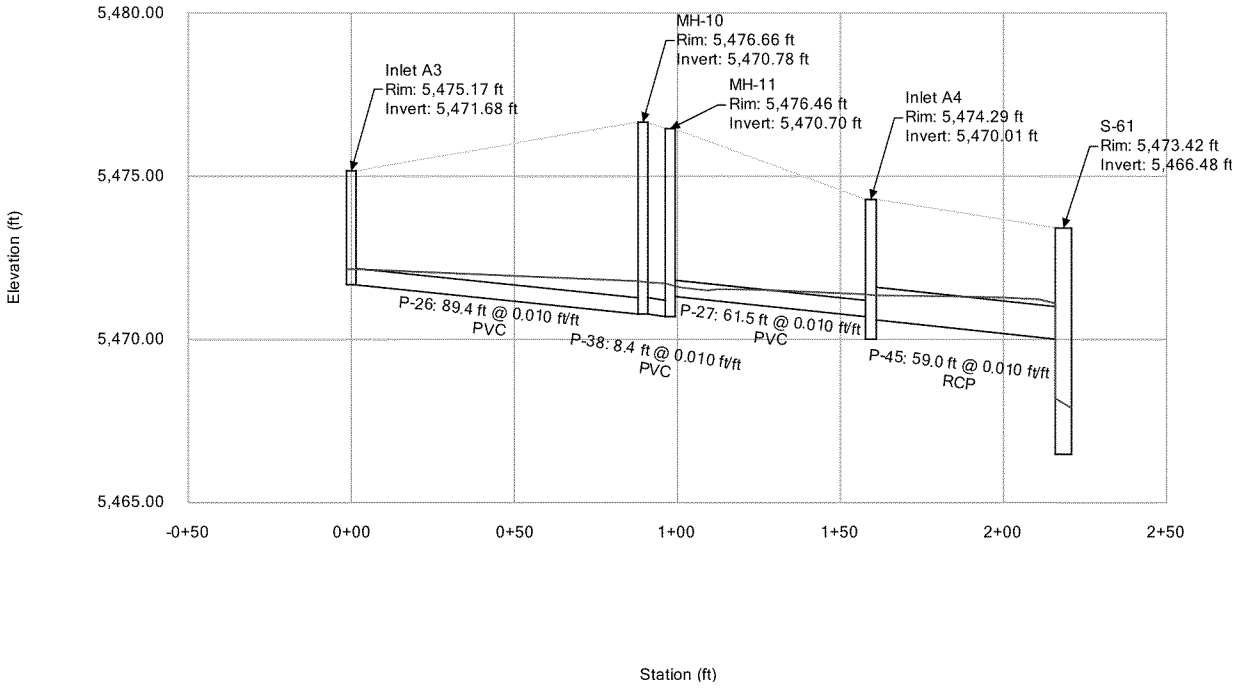
Depth (ft)	= 0.89
Q (cfs)	= 12.80
Area (sqft)	= 1.09
Velocity (ft/s)	= 11.70
Wetted Perim (ft)	= 2.64
Crit Depth, Yc (ft)	= 1.35
Top Width (ft)	= 1.47
EGL (ft)	= 3.02



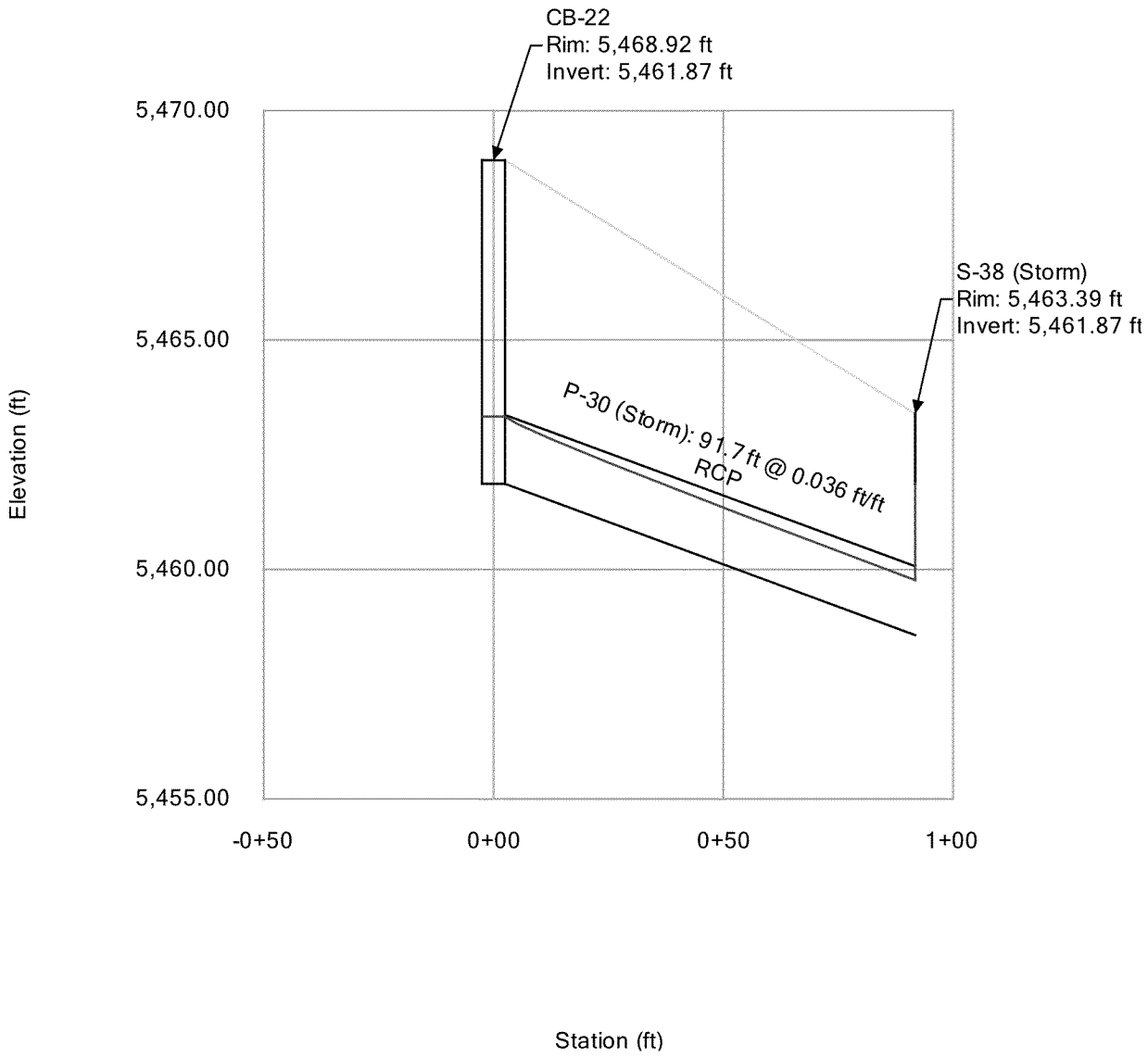
Profile Report
Engineering Profile - Inlet A2 to ADS (Storm Pipe Calcs REV.stsw)

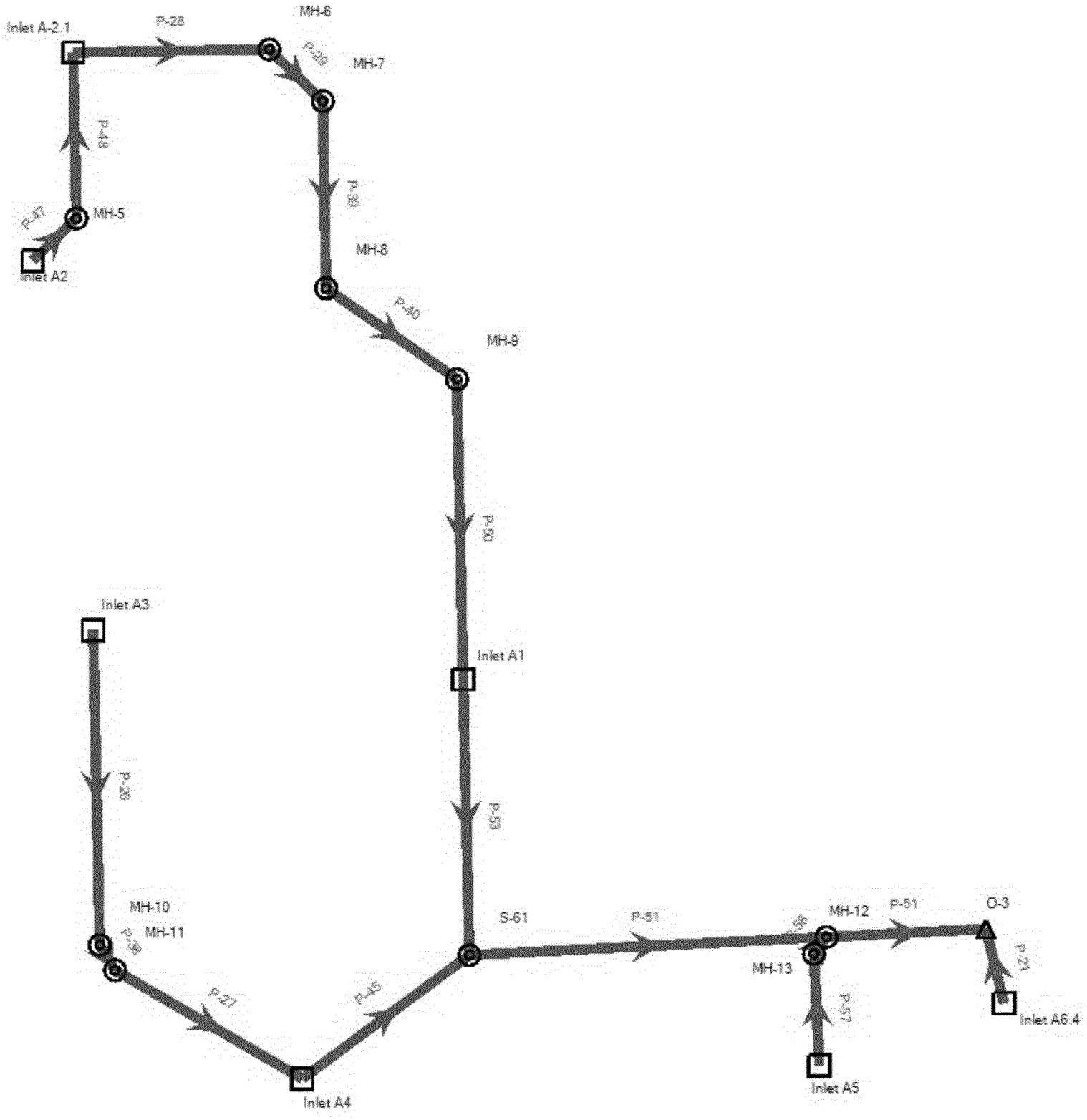


Profile Report
Engineering Profile - Inlet A3 to S-61 (Storm Pipe Calcs REV.stsw)



Profile Report
Engineering Profile - Outfall Pipe (Outfall Calcs.stsw)




Inlet A-2.1
P-28
MH-6
P-39
MH-7
P-46
P-38
P-47
MH-5
Inlet A2
MH-8
P-40
MH-9
P-55
Inlet A3
Inlet A1
P-56
P-53
MH-10
P-48
MH-11
S-61
P-51
MH-12
P-51
O-3
P-27
P-45
MH-13
P-21
P-57
Inlet A6.4
Inlet A5
Inlet A4

Label	-Node- Upstream Downstream	Diameter (in)	Slope (Calculated) (ft/ft)	Flow (cfs)	Length (User Defined) (ft)	Velocity (ft/s)	-EGL- Upstream Downstream (ft)	-Ground- Upstream Downstream (ft)	-HGL- Upstream Downstream (ft)	-Invert- Upstream Downstream (ft)	Section Discharge Capacity (cfs)	Capacity (Design) (cfs)
P-28	Inlet A-2.1	6	0.01	0.28	55.8	3.03	5471.85	5475.37	5471.75	5471.48	0.28	0.61
	MH-6						5471.32	5475.43	5471.25	5470.92	0.61	
P-48	MH-5	6	0.01	0.18	47.1	2.7	5472.34	5475.32	5472.26	5472.05	0.18	0.61
	Inlet A-2.1						5471.88	5475.37	5471.83	5471.48	0.61	
P-26	Inlet A3	6	0.01	0.39	89.4	3.29	5472.22	5475.17	5472.15	5471.68	0.39	0.61
	MH-10						5471.85	5476.66	5471.79	5470.78	0.61	
P-47	Inlet A2	6	0.01	0.18	17.4	2.7	5472.51	5474.32	5472.43	5472.22	0.18	0.61
	MH-5						5472.36	5475.32	5472.31	5472.05	0.61	
P-45	S-61	12	0.01	1.43	59	1.82	5468.23	5473.42	5471.35	5466.48	1.43	3.86
	Inlet A4						5471.44	5474.29	5471.11	5470.01	3.86	
P-27	MH-11	6	0.01	0.39	61.5	3.29	5471.77	5476.46	5471.63	5470.7	0.39	0.61
	Inlet A4						5471.44	5474.29	5471.38	5470.01	0.61	
P-53	Inlet A1	12	0.01	4.26	78.3	5.42	5470.37	5474.2	5469.92	5468.88	4.26	3.86
	S-61						5468.73	5473.42	5468.97	5466.48	3.86	
P-51	S-61	12	0.01	5.69	101.7	4.64	5468.23	5473.42	5467.9	5466.48	5.69	3.56
	MH-12						5467.44	5469.32	5467.11	5465.46	3.56	
P-38	MH-10	6	0.01	0.39	8.4	1.99	5471.81	5476.66	5471.75	5470.78	0.39	0.61
	MH-11						5471.78	5476.46	5471.72	5470.7	0.61	
P-29	MH-6	6	0.01	0.28	21.1	3.03	5471.29	5475.43	5471.19	5470.92	0.28	0.61
	MH-7						5471.11	5475.41	5471.04	5470.71	0.61	
P-39	MH-7	6	0.01	0.28	53.1	3.03	5471.08	5475.41	5470.98	5470.71	0.28	0.61
	MH-8						5470.58	5475.43	5470.51	5470.18	0.61	
P-40	MH-8	6	0.01	0.28	45.3	3.03	5470.56	5475.43	5470.45	5470.18	0.28	0.61
	MH-9						5470.38	5474.25	5470.34	5468.88	0.61	
P-50	MH-9	6	0.01	0.28	85.3	1.43	5470.36	5474.25	5470.32	5468.88	0.28	0.61
	Inlet A1						5470.18	5474.2	5470.14	5468.88	0.61	
P-57	Inlet A5	8	0.01	1.51	31.8	4.33	5468.08	5469.12	5467.78	5465.84	1.51	1.31
	MH-13						5467.65	5469.51	5467.36	5465.52	1.31	
P-21	Inlet A6.4	12	0.012	11.12	21.7	14.16	5470.68	5467.9	5467.57	5464.71	11.12	3.89
	O-3						(N/A)	5468.56	5465.45	5458	3.89	
P-51	MH-12	12	0.01	7.2	45.4	5.87	5467.22	5469.32	5466.67	5465.46	7.2	3.56
	O-3						(N/A)	5468.56	5466.08	5458	3.56	
P-58	MH-13	8	0.01	1.51	5.9	4.33	5467.48	5469.51	5467.19	5465.52	1.51	1.31
	MH-12						5467.44	5469.32	5467.11	5465.46	1.31	

Label	-Node- Upstream Downstream	Diameter (in)	Slope (Calculated) (ft/ft)	Flow (cfs)	Length (User Defined) (ft)	Velocity (ft/s)	-EGL- Upstream Downstream (ft)	-Ground- Upstream Downstream (ft)	-HGL- Upstream Downstream (ft)	-Invert- Upstream Downstream (ft)	Section Discharge Capacity (cfs)	Capacity (Design) (cfs)
P-30 (Storm)	CB-22	18	0.036	19.06	91.7	12.83	5465.16	5468.92	5463.33	5461.87	19.06	19.92
	S-38 (Storm)						(N/A)	5463.39	5459.77	5461.87	19.92	

Low Tail Water Basin and Riprap Design OF-1

Project Name KT Superior

5-Mar-24

Instructions: Refer to Section 3.4.3.2 of Chap 8 Vol 2 in UD Manual. Enter values in blue cells. Green cells are calculated.

100-year design flows

Outlet Pipe Information:

Type of Pipe:	Circular	
Storm Sewer Dia, D =	1.5	ft

Riprap Size:

Velocity =	3.4	ft/s (1)	100 Year
Design Depth, d =	0.34	ft (2)	
Gravity, g =	32.2	ft/s^2	

Eqn: HS-16e

P_d = 4.74 ft/s

Use Figure HS-20c to find the size and type of riprap to use in the outlet protection basin.

Riprap Selection:	**Type L**
Riprap Diameter, D_{50} =	9 inches

Riprap Minimum Thickness:

Eqn: HS-17

Thickness, T = 1.31 ft

Basin Dimensions:

Storm Sewer Dia, D = 1.5 ft

Length is defined as being the greater of the following:

L = 4D =	6	ft	Eqn: HS-18
L = (D)^0.5(V/2) =	2.082066281	ft	Eqn: HS-19
L =	**6**	ft	

Width:

w = width of box culvert	1.5	ft	
W = 4D =	6	ft	Eqn: HS-20 or HS-21

Cutoff Wall:

B = 2.06 ft Eqn: HS-22

(1) Obtain Velocity from Section 3.4.3.1 of Vol 2 in the UD Manual or program such as FlowMaster or StormCad

(2) Obtain flow depth from Section 3.4.3.1 of Vol 2 in the UD Manual or program such as FlowMaster or StormCad

Appendix D – Drainage Plans

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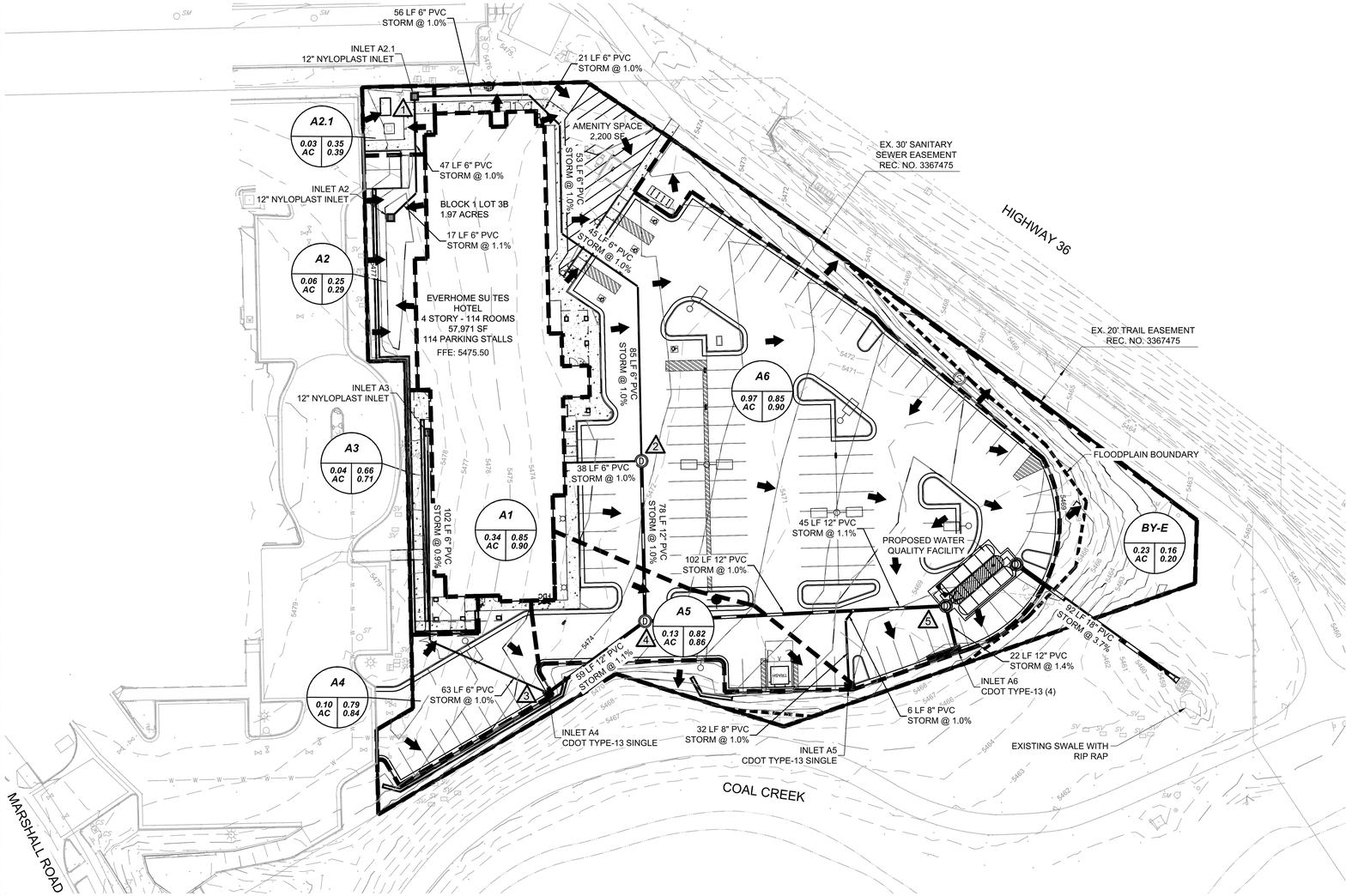
SUPERIOR TOWN CENTER FINAL DEVELOPMENT PLAN FOR
EVERHOME SUITES - SUPERIOR
AT McCASLIN & MARSHALL ROAD

LEGAL DESCRIPTION:

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO



LEGEND

- PROPOSED CONTOURS
- EXISTING CONTOURS
- PROPOSED EASEMENT
- PROPOSED BASIN DELINEATION
- PROPOSED BUILDING SETBACK
- PROPOSED BUILDING
- EXISTING CURB AND GUTTER
- PROPOSED 6" CURB AND GUTTER
- EXISTING STORM SEWER LINE
- PROPOSED STORM SEWER LINE
- PROPOSED STORM MANHOLES
- EXISTING STORM MANHOLES
- PROPOSED STORM INLET/GRATE
- EXISTING STORM INLET
- FLOW ARROW AND GRADE
- FLOODPLAIN LIMIT
- DRAINAGE FLOW ARROW
- DESIGN POINT
- BASIN DESIGNATION
- 5-YEAR RUNOFF COEFFICIENT
- 100-YEAR RUNOFF COEFFICIENT
- BASIN AREA IN ACRES

BASIN SUMMARY

DESIGN POINT	TRIBUTARY BASIN	AREA (AC)	PERCENT IMPERVIOUS	COEFFICIENT C5	COEFFICIENT C100	TOTAL RUNOFF* Q5 (CFS)	TOTAL RUNOFF* Q100 (CFS)
1	A2	0.06	14.6	0.25	0.29	0.06	0.12
	A2.1	0.03	28.0	0.35	0.39	0.03	0.07
2	A1	0.34	90.0	0.85	0.90	1.31	2.67
3	A3	0.04	70.2	0.66	0.71	0.13	0.26
	A4	0.10	87.6	0.79	0.84	0.34	0.70
4	A5	0.13	91.2	0.82	0.86	0.50	1.01
5	A6	0.97	96.3	0.85	0.90	3.67	7.45
	BY-E	0.30	2.0	0.16	0.20	0.22	0.52
Total Proposed Site		1.97	76.1	0.71	0.76	6.26	12.80

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

811 Know what's below. Call before you dig.

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987 or 811
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

N

SCALE IN FEET
0 30 60

IF BAR DOES NOT MEASURE 1 INCH THEN DRAWING IS NOT TO SCALE

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

EES ENTITLEMENT AND ENGINEERING SOLUTIONS, INC.
3801 E. Florida Avenue, Suite 425
Denver, CO 80210
303-572-7997 www.ees.us.com

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
DRAINAGE PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	4/19/24

P2.0

P:\KT DEVELOPMENT\CO, SUPERIOR - MCCASLIN & MARSHALL RD\08 CAD\FDP\P2.0 DRAINAGE PLAN.DWG

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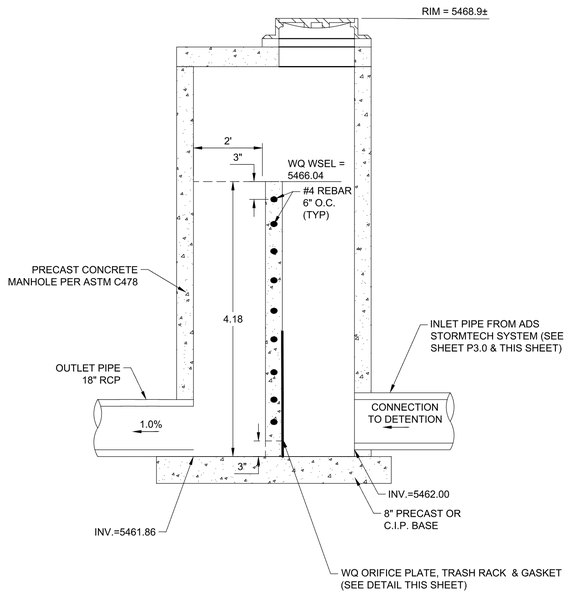
SUPERIOR TOWN CENTER FINAL DEVELOPMENT PLAN FOR

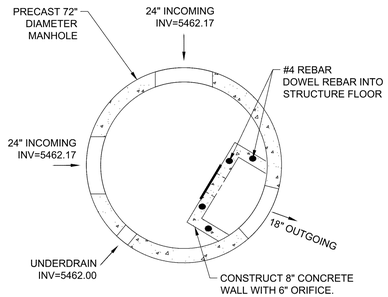
EVERHOME SUITES - SUPERIOR
AT McCASLIN & MARSHALL ROAD

LEGAL DESCRIPTION:

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO

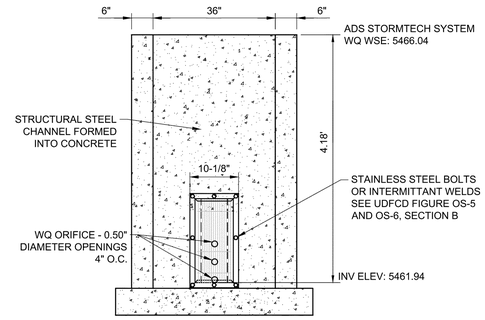


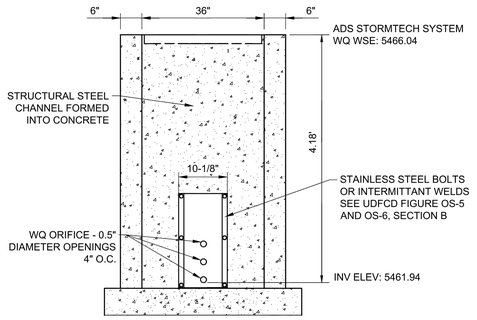
SECTION VIEW



PLAN VIEW

ADS STORMTECH SYSTEM OUTLET STRUCTURE DETAIL





ADS STORMTECH SYSTEM WQ ORIFICE PLATE DETAIL

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1-800-922-1987 or 811
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Know what's below. Call before you dig.

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

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3801 E. Florida Avenue, Suite 425
Denver, CO 80210
303-572-7997 www.ees.us.com

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
DRAINAGE PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	4/19/24

P2.0

P:\KT DEVELOPMENT\CO, SUPERIOR - MCCASLIN & MARSHALL RD\08 CAD\C3D\D1 3 DRAINAGE DETAILS.DWG

Appendix E – ADS Stormtech Details

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	JEROME MAGSINO 303-349-7555 JEROME.MAGSINO@ADSPIPE.COM
ADS SALES REP	MARK KAELBERER 720-256-8225 MARK.KAELBERER@ADS-PIPE.COM
PROJECT NO.	S401166

Advanced Drainage Systems, Inc.

SiteAssist™
FOR STORMTECH
INSTALLATION INSTRUCTIONS
VISIT OUR APP

EVERHOME SUITES

SUPERIOR, CO, USA

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

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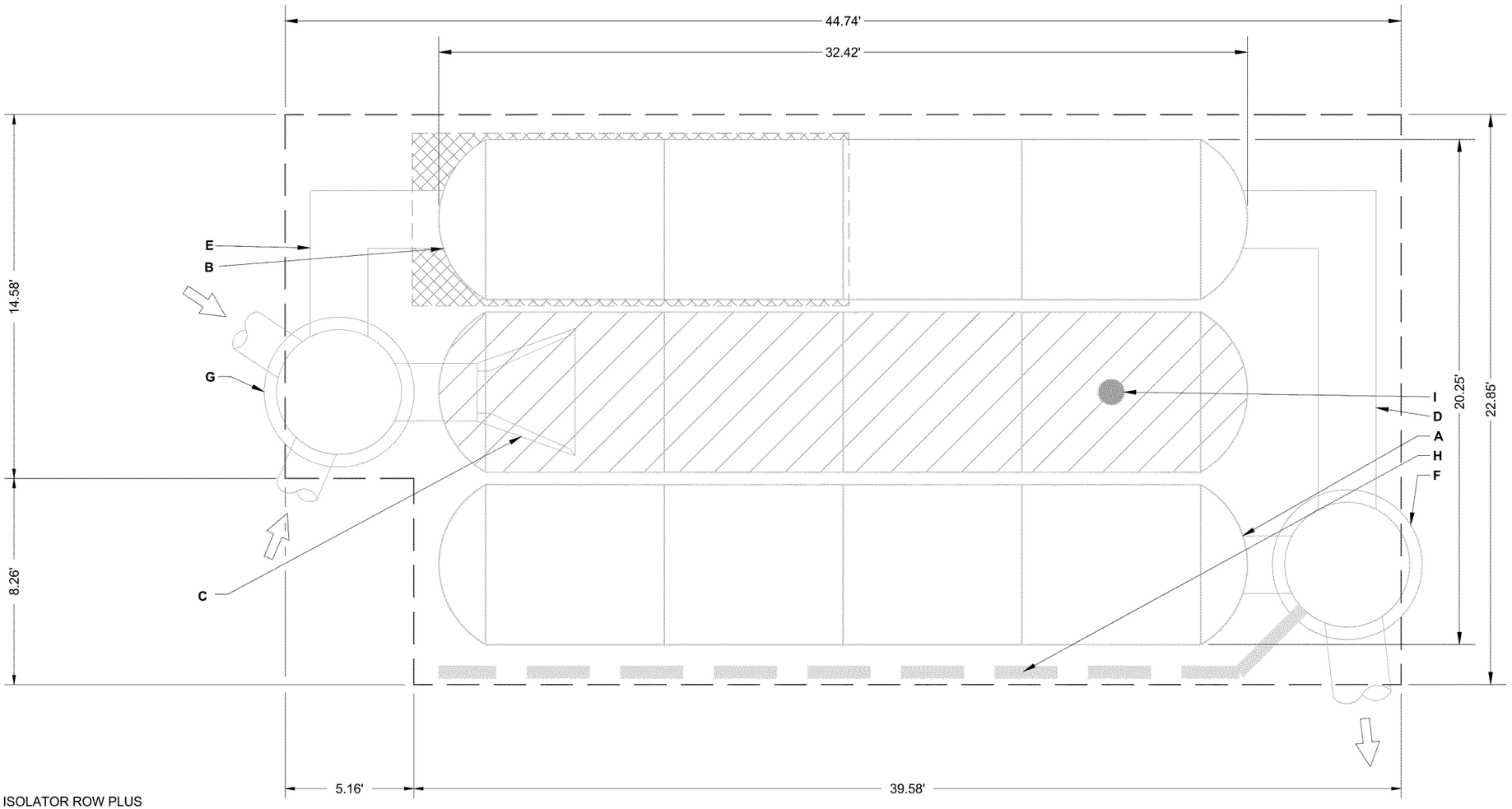
PROPOSED LAYOUT	
12	STORMTECH MC-3500 CHAMBERS
6	STORMTECH MC-3500 END CAPS
12	STONE ABOVE (in)
9	STONE BELOW (in)
40	STONE VOID
979	SYSTEM AREA (SF)
135	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS:	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	5474.50
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	5468.50
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	5468.00
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	5468.00
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	5468.00
TOP OF STONE:	5467.50
TOP OF MC-3500 CHAMBER:	5466.50
24" x 24" TOP MANIFOLD INVERT:	5463.96
24" x 24" BOTTOM MANIFOLD INVERT:	5462.92
24" ISOLATOR ROW PLUS INVERT:	5462.92
24" BOTTOM CONNECTION INVERT:	5462.92
BOTTOM OF MC-3500 CHAMBER:	5462.75
UNDERDRAIN INVERT:	5462.00
BOTTOM OF STONE:	5462.00

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP, PART#: MC3500IEPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.06"	
PREFABRICATED END CAP	B	24" TOP CORED END CAP, PART#: MC3500IEPP24TC / TYP OF ALL 24" TOP CONNECTIONS	14.48"	
FLAMP	C	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP		
MANIFOLD	D	24" x 24" BOTTOM MANIFOLD, ADS N-12	2.06"	
MANIFOLD	E	24" x 24" TOP MANIFOLD, ADS N-12	14.48"	
CONCRETE STRUCTURE	F	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		14.0 CFS OUT
CONCRETE STRUCTURE	G	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		8.5 CFS IN
UNDERDRAIN	H	6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		
INSPECTION PORT	I	4" SEE DETAIL		



ISOLATOR ROW PLUS
(SEE DETAIL)

PLACE MINIMUM 17.50' OF ADSPLUS175 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING
THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.

EVERHOME SUITES
SUPERIOR, CO, USA
DATE: 4-15-2024 DRAWN: MAH CHECKED: XXX
PROJECT #: S401166

DATE	DRW	CHK	DESCRIPTION

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StormTech®
Chamber System
888-892-2694 | WWW.STORMTECH.COM

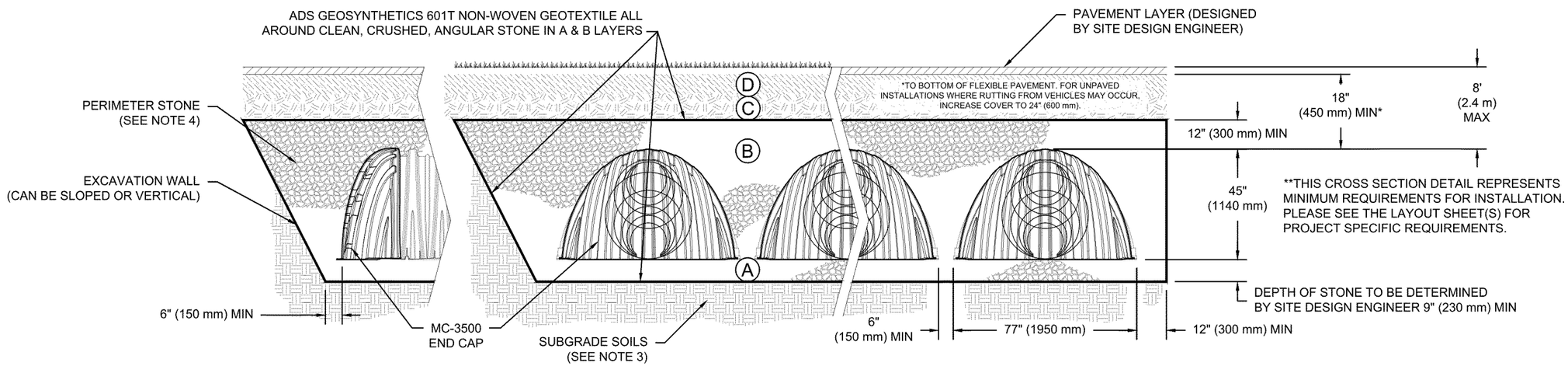
ADS
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

0 5 10

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

EVERHOME SUITES
SUPERIOR, CO, USA
DATE: 4-15-2024 | DRAWN: MAH | CHECKED: XXX
PROJECT #: S401166

DATE	DESCRIPTION	CHK	DRW

StormTech® Chamber System
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1-800-733-7473

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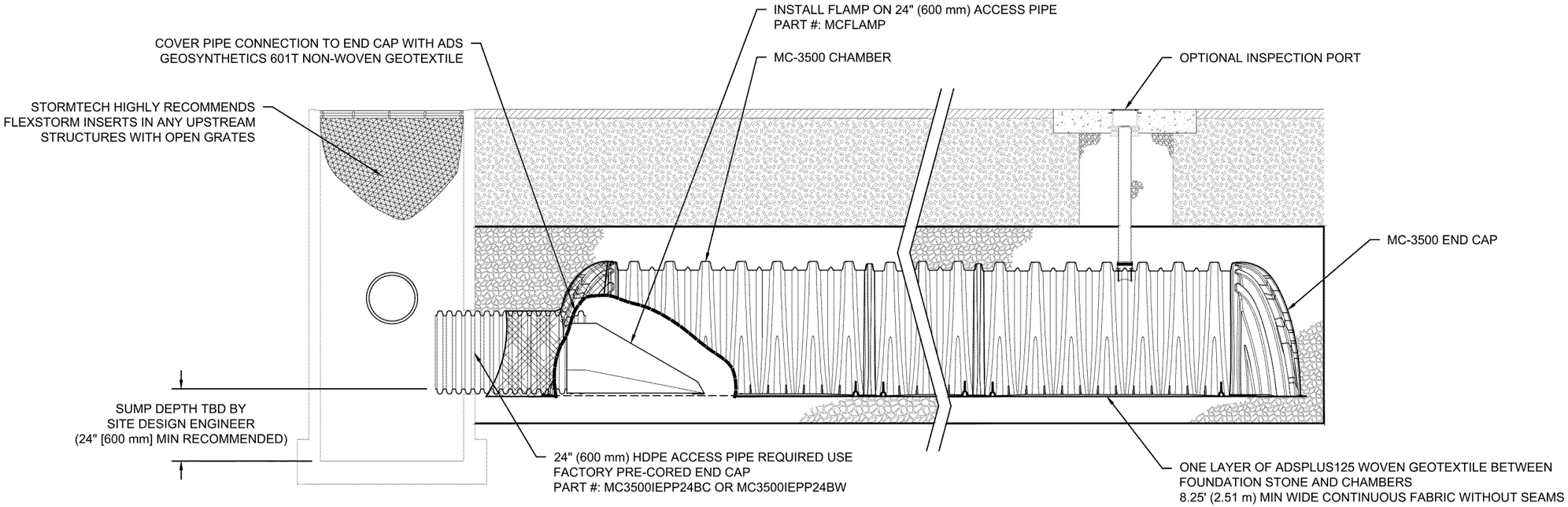


MC-3500 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

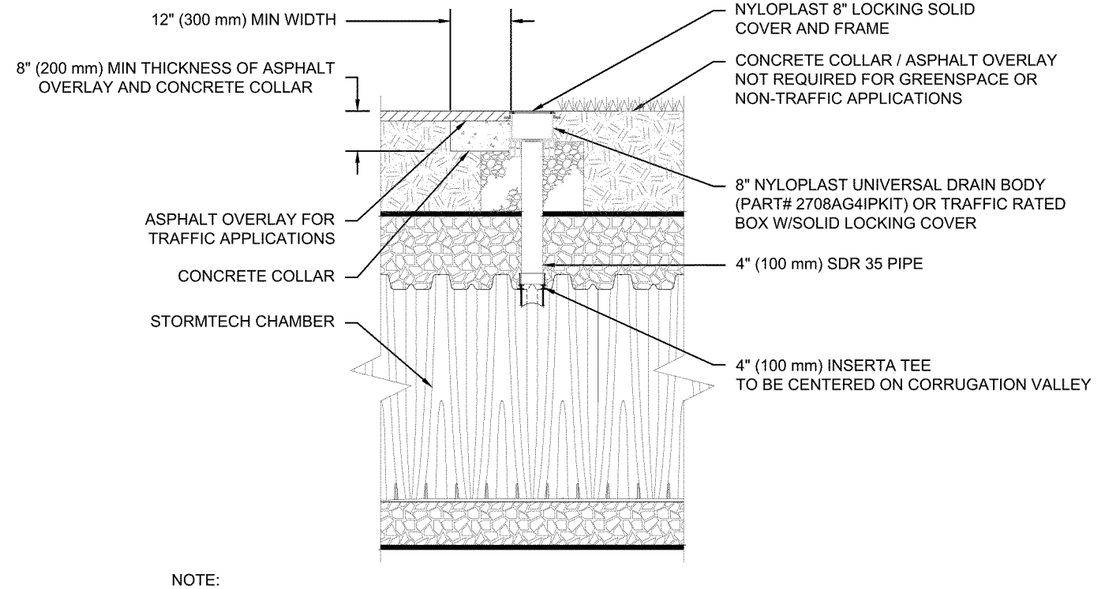
STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.

4" PVC INSPECTION PORT DETAIL
(MC SERIES CHAMBER)
NTS

EVERHOME SUITES
SUPERIOR, CO, USA
DATE: 4-15-2024 DRAWN: MAH
PROJECT #: S401166 CHECKED: XXX

DESCRIPTION	DATE	DRW	CHK

StormTech® Chamber System
888-892-2694 | WWW.STORMTECH.COM

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HILLIARD, OH 43026
1-800-733-7473

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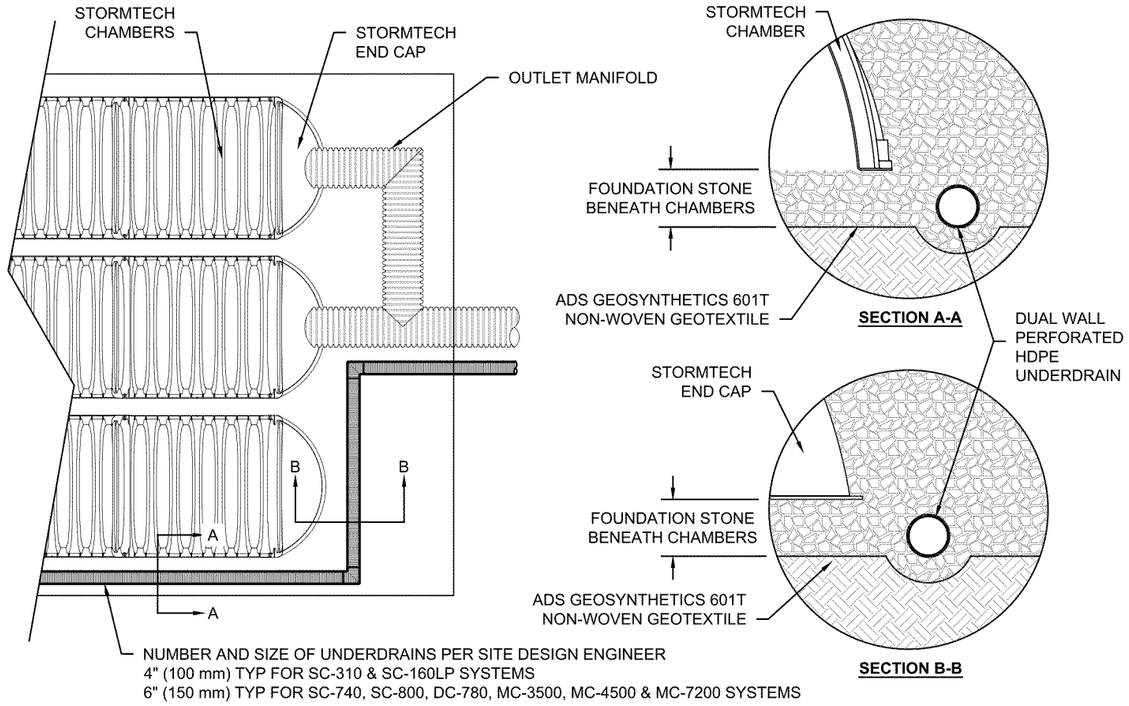
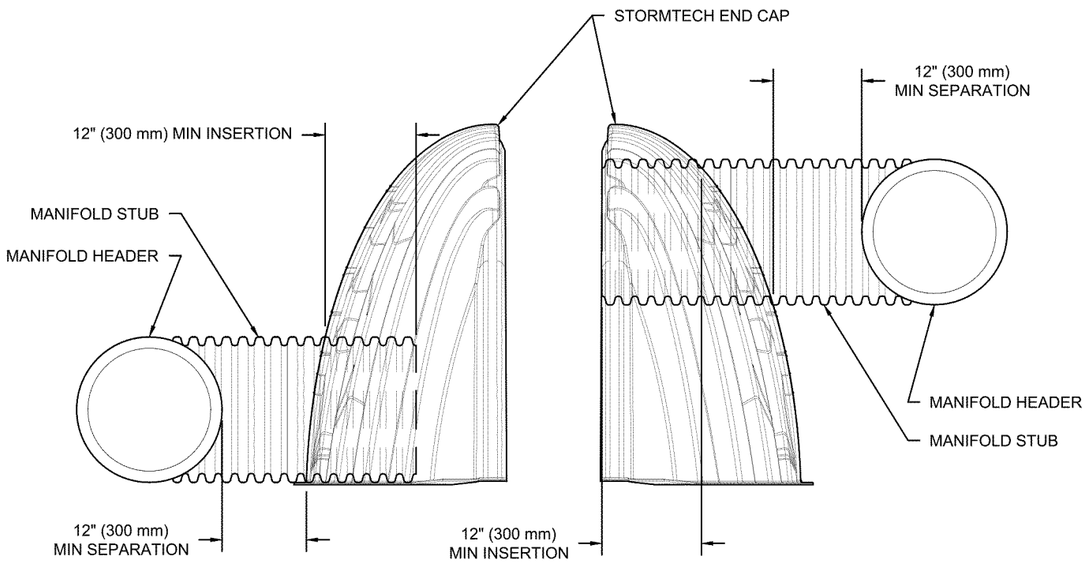
UNDERDRAIN DETAIL

NTS



MC-SERIES END CAP INSERTION DETAIL

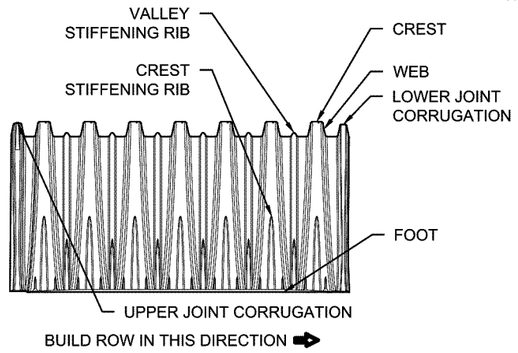
NTS

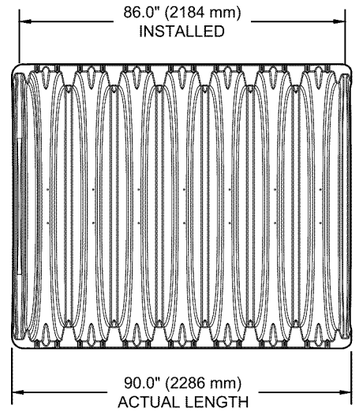


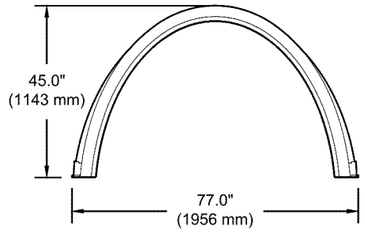
NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

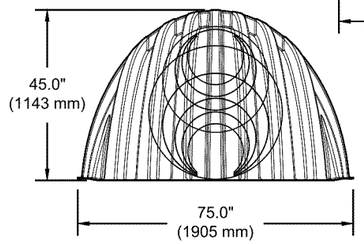
MC-3500 TECHNICAL SPECIFICATION

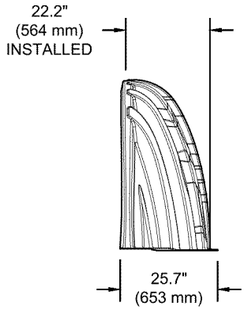
NTS











NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

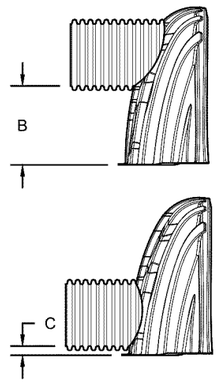
SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

EVERHOME SUITES
SUPERIOR, CO, USA
DATE: 4-15-2024 DRAWN: MAH CHECKED: XXX
PROJECT #: S401166

DESCRIPTION	CHK	DRW	DATE

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888-892-2694 | WWW.STORMTECH.COM
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

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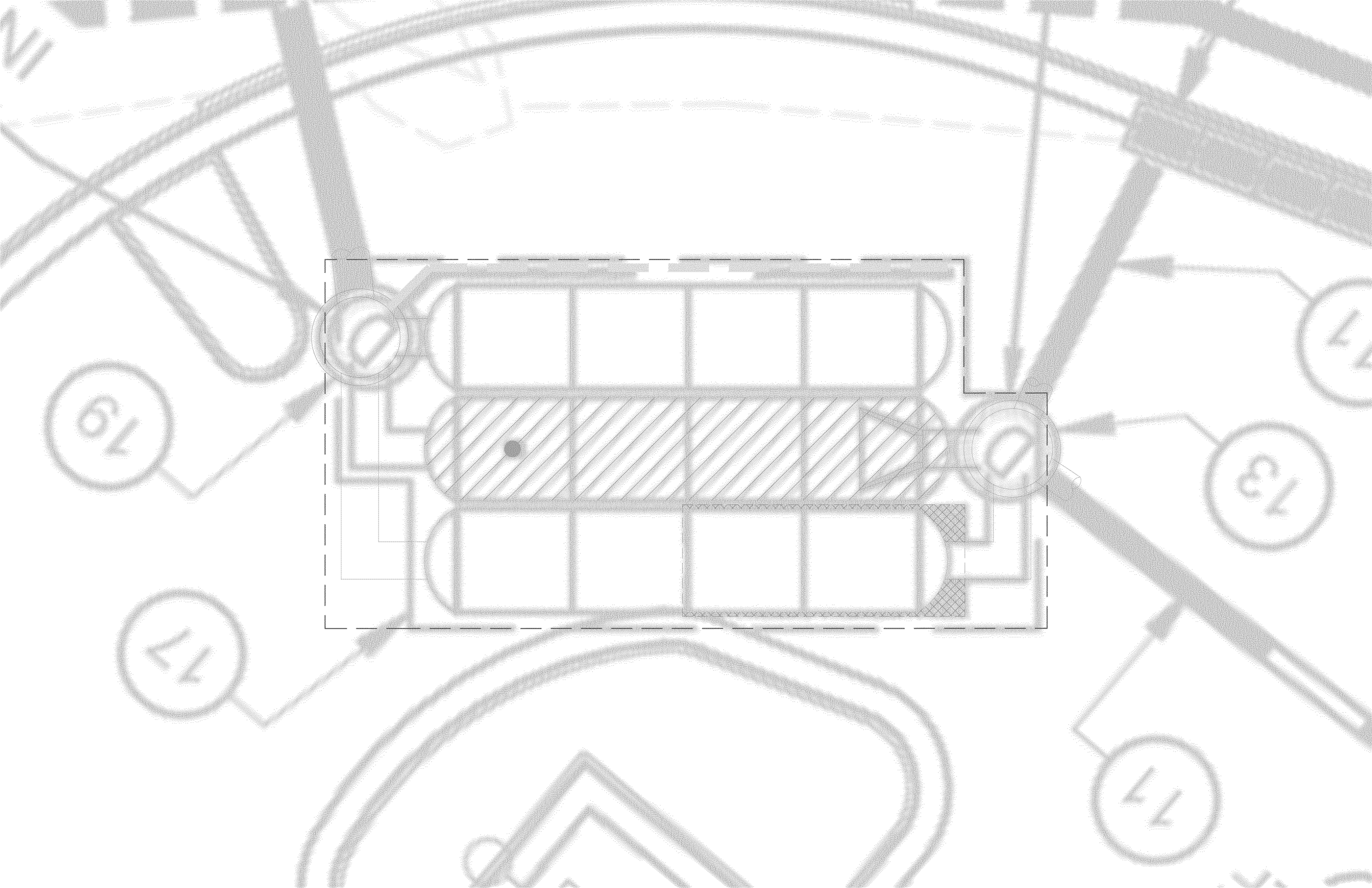

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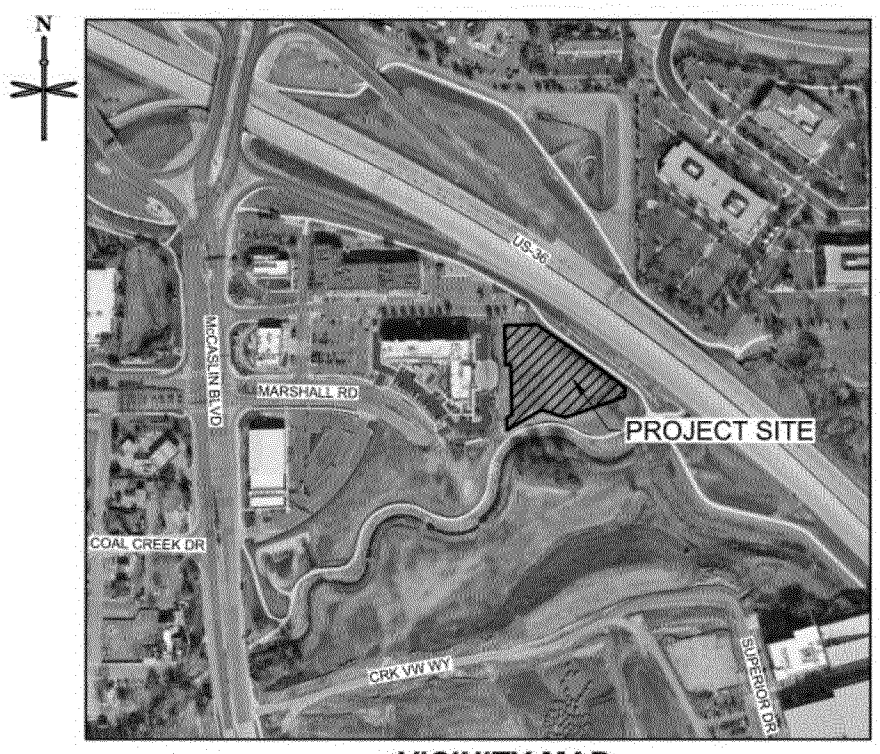
April 15, 2024

Mr. Geoffrey Weathers, Planner
Town of Superior
124 E. Coal Creek Drive
Superior, Colorado 80027

RE: Water Demand Report
Everhome Suites Superior – Development Plan

I. INTRODUCTION, LOCATION, AND METHODOLOGY

This letter is an analysis of water and sewer demands anticipated for the development of a proposed Everhome Suites hotel. The subject property is located in the Town of Superior near the intersection of Marshall Road & McCaslin Blvd. The project lies within the NW ¼ of Section 19, Township 1 South, Range 69 West of the 6th Principal Meridian in the Town of Superior, County of Boulder, State of Colorado. The project site is defined as Lot 3B, Block 1, Superior Town Center Filing No. 1B Replat No.3. More specifically, the project is located at 3 Marshall Road per the Vicinity Map below.



VICINITY MAP
SCALE: 1"=650'

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The proposed development include the construction of a 114-room Everhome Suites extended stay hotel with outdoor amenity area and associated parking, drives, and landscaping. The proposed development will utilized existing water and sanitary sewer mainlines as outlined in the sections below.

This report includes all the base data, method, assumptions and calculations in accordance with the Superior Design Standards and Specifications for the purpose of quantifying the water demanded and sanitary sewerage anticipated to be produced at the time of this letter. Calculations have been prepared in conjunction with the concurrent Development Plan application.

II. EXISTING WATER SYSTEM & CALCULATED DEMAND

The nearest existing water main to the project site is an existing 12" PVC water main located within an utility easement west of the project site on the east side of the neighboring Lot 3A, Block 1 Superior Town Center Filing No. 1B Replat No. 3. A 12" PVC stub is provided to the hotel project site near the southwest corner of the site within the shared access drive. This stub will be utilized for connection of services and fire protection associated with the Everhome Suites Development.

There is also an existing 8" PVC raw water main located parallel to 12" potable line within the neighboring Lot 3A development. An 8" PVC raw water stub is provided to the hotel project site near the southwest corner of the site within the shared access drive. This stub will be utilized for connection of irrigation service associated with the Everhome Suites Development.

The proposed project is proposing a 114-room extended stay hotel with an amenity area and associated parking, drives and landscaping. Based on building plumbing design and fixture calculation (see attached calculations in appendix of this report) the domestic fixed demand is **137 GPM** which required a **2" tap and meter**. The hotel will also be fire sprinklered utilizing a proposed 6" fire service line connection to the building.

III. EXISTING SANITARY SEWER SYSTEM & CALCULATED DEMAND

The nearest existing sanitary sewer main is located along the eastern property line of the hotel site within an existing 30' sanitary sewer easement. The existing main flows from northwest to southeast and is an existing 14" PVC main.

The proposed project is proposing a 114-room extended stay hotel with an amenity area and associated parking, drives and landscaping. The Maximum Day Demand for the sanitary sewer for this site was estimated based on the Town of Superior Design Standards and Specification Section 500 – Sanitary Sewer Facilities. While the hotel is a commercial use, the extended stay hotel functions more as a residential use based on the number of units within the hotel. Based on the design standards it is estimated that the Maximum Day Demand would be **0.06 MGD**. The proposed development will utilize a proposed 6" PVC sanitary service that will connect to the

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existing main on the east side of the site. There is not a restaurant/kitchen element to this hotel and therefore no proposed grease interceptor required as part of this development.

Please contact us with any questions during the review process.

Respectfully,
Entitlement & Engineering Solutions, Inc.

Krysta Houtchens, PE
Associate/Sector Lead

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EXHIBIT A – UTILITY MAP

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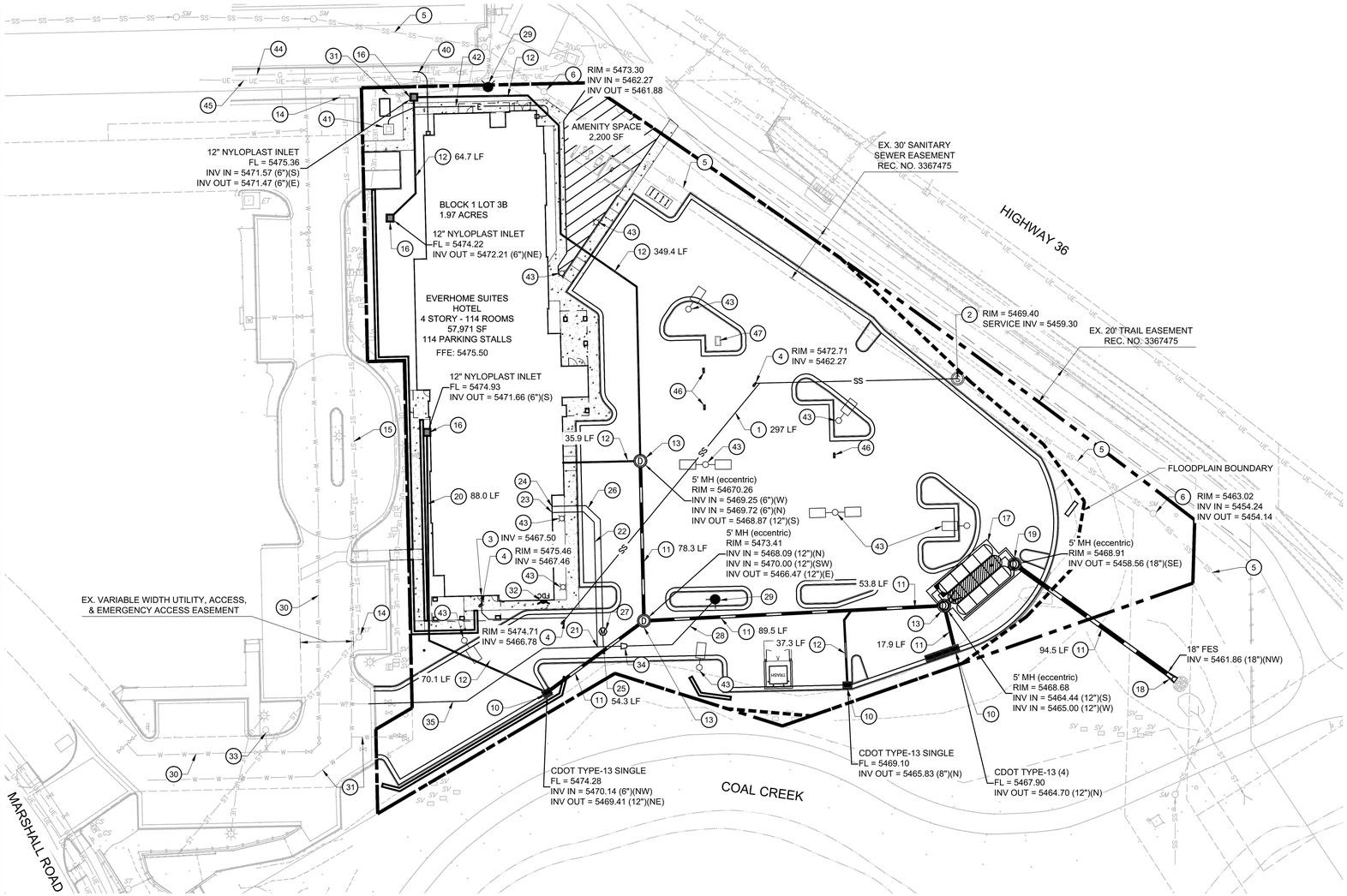
SUPERIOR TOWN CENTER FINAL DEVELOPMENT PLAN FOR
EVERHOME SUITES - SUPERIOR AT McCASLIN & MARSHALL ROAD

LEGAL DESCRIPTION:

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO



UTILITY SCHEDULE

SANITARY

1. PROPOSED 6" SANITARY SERVICE @ 2% MINIMUM SLOPE.
2. PROPOSED SANITARY SEWER MANHOLE AT SERVICE CONNECTION TO EXISTING SEWER.
3. PROPOSED 6" SANITARY SERVICE CONNECTION TO BUILDING.
4. PROPOSED SANITARY CLEANOUT.
5. EXISTING 15" PVC SANITARY SEWER MAIN.
6. EXISTING SANITARY SEWER MANHOLE.

STORMWATER

10. PROPOSED TYPE 13 COMBO INLET.
11. PROPOSED 12"-18" RCP STORM SEWER PIPE.
12. PROPOSED 6" PVC STORM SEWER PIPE.
13. PROPOSED 5' STORM MANHOLE.
14. EXISTING STORM SEWER INFRASTRUCTURE
15. EXISTING STORM SEWER PIPE.
16. PROPOSED 12" NYOPLAST AREA INLET.
17. PROPOSED ADS STORMWATER TREATMENT SYSTEM.
18. PROPOSED 18" FLARED END SECTION.
19. PROPOSED OUTLET CONTROL STRUCTURE.
20. PROPOSED DURASLOT SLOTTED DRAIN.

WATER

21. PROPOSED 6" FIRE LINE CONNECTION TO 12" PVC WATER LINE.
22. PROPOSED 6" FIRE LINE SERVICE
23. PROPOSED 6" FIRE LINE CONNECTION TO BUILDING, BACKFLOW PREVENTOR LOCATED INSIDE THE BUILDING.
24. PROPOSED 2" DOMESTIC CONNECTION TO BUILDING. BACKFLOW PREVENTOR LOCATED INSIDE THE BUILDING.
25. PROPOSED 2" DOMESTIC CONNECTION TO 12" PVC WATER LINE.
26. PROPOSED 2" DOMESTIC SERVICE.
27. PROPOSED 2" DOMESTIC WATER METER.
28. PROPOSED 6" FIRE HYDRANT LINE.
29. PROPOSED FIRE HYDRANT.
30. EXISTING WATER MAIN.
31. EXISTING IRRIGATION MAIN.
32. PROPOSED FDC LOCATION.
33. EXISTING FIRE HYDRANT.
34. PROPOSED 12"X6" REDUCER.
35. PROPOSED 12" PVC WATER LINE EXTENSION.

DRY UTILITIES

40. PROPOSED GAS SERVICE, CONTRACTOR TO COORDINATE WITH XCEL ENERGY TO CONFIRM EXISTING GAS MAIN LOCATION.
41. PROPOSED TRANSFORMER LOCATION - GENERAL CONTRACTOR TO FINALIZE LOCATION WITH UTILITY PROVIDER.
42. PROPOSED ELECTRIC SERVICE
43. PROPOSED SITE LIGHTING (REFER TO PHOTOMETRIC PLANS FOR FINAL LOCATION).
44. EXISTING GAS MAIN.
45. EXISTING UNDERGROUND ELECTRIC.
46. PROPOSED EV CHARGING PEDESTAL.
47. PROPOSED EV CHARGING TRANSFORMER AND PANELS.

UTILITY NOTES:

1. ALL ITEMS IN SCHEDULE ARE PROPOSED UNLESS OTHERWISE NOTED.
2. ALL EXISTING ITEMS IN SCHEDULE ARE TO REMAIN UNLESS OTHERWISE NOTED.

TOWN OF SUPERIOR UTILITY MAINTENANCE STATEMENT

ALL PUBLIC WATER, REUSE WATER, STORM SEWER, AND SANITARY SEWER MAINS AND APPURTENANCES LOCATED IN PUBLIC ROW SHALL BE MAINTAINED BY THE TOWN'S PUBLIC WORKS AND UTILITIES DEPARTMENT. ALL PUBLIC WATER, REUSE WATER, STORM SEWER, SANITARY SEWER MAINS, AND APPURTENANCES UNDER PRIVATE DRIVES ARE LOCATED IN UTILITY EASEMENTS. THE TOWN IS RESPONSIBLE FOR MAINTENANCE OF THESE FACILITIES. THE TOWN IS NOT RESPONSIBLE FOR REPAIR OR REPLACEMENT OF PRIVATE DRIVE, CURB AND GUTTER, OR LANDSCAPING DAMAGED DURING UTILITY REPAIR OR MAINTENANCE.

LEGEND

- PROPOSED EASEMENT
- PROPERTY LINE
- PROPOSED BUILDING
- EXISTING CURB AND GUTTER
- SS — EXISTING SANITARY SEWER
- PROPOSED STORM SEWER LINE
- SS — PROPOSED SANITARY SEWER
- G — PROPOSED GAS LINE
- E — PROPOSED UNDERGROUND ELECTRIC LINE
- PROPOSED WATER LINE
- PROPOSED WATER METER
- FDC — PROPOSED FIRE DEPARTMENT CONNECTION
- PROPOSED FIRE HYDRANT
- FLOODPLAIN LIMIT
- PROPOSED STORM MANHOLES
- EXISTING STORM MANHOLES
- PROPOSED STORM INLET
- CO — PROPOSED CLEANOUT

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

811 Know what's below. Call before you dig.

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987 or 811
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

N

SCALE IN FEET
0 30 60

IF BAR DOES NOT MEASURE 1 INCH THEN DRAWING IS NOT TO SCALE

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
UTILITY PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	4/19/24

P3.0

P:\KT DEVELOPMENT\CO, SUPERIOR - MCCASLIN & MARSHALL RD\08 CAD\FDP\P3.0 UTILITY PLAN.DWG

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EXHIBIT B – WATER AND SEWER DEMAND CALCULATIONS

Water Meter Sizing per AWWA M22, Third Edition

Project: Everhome Suites

Address:

City: Superior State: CO Zip Code:

Type of Occupancy Extended Stay Hotel

Fixture	Fixture Value 60 psi		No. of Fixtures		Fixture Value
Bathtub	8	x	41	=	328
Bedpan Washers	10	x		=	0
Bidet	2	x		=	0
Dental Unit	2	x		=	0
Drinking Fountain – Public	2	x	2	=	4
Kitchen Sink	1.8	x	115	=	207.0
Lavatory	1.5	x	116	=	174.0
Showerhead (Shower Only)	2.5	x	73	=	182.5
Service Sink	4	x	2	=	8
Toilet – Flush Valve	35	x		=	0
– Tank Type	6	x	116	=	696
Urinal – Pedestal Flush Valve	35	x		=	0
– Wall Flush Valve	16	x		=	0
Wash Sink (Each Set of Faucets)	4	x		=	0
Dishwasher	2	x		=	0
Washing Machine	6	x	6	=	36
Hose (50 ft. Wash Down) – ½ in.	5	x	4	=	20
– ⅝ in.	9	x		=	0
– ¾ in. Commercial ClWsh	12	x	4	=	48
			Combined Fixture Total		1,691.5

Water-flow Demand per Fixture Value from Figure 4-2 or 4-3 x Pressure Adjustment Factor = 137.0 gpm

(For Residual Pressures at Fixture Outlet from 60-80 psi, Pressure Adjustment Factor is 1.00 per Table 4-3)

TOTAL FIXED DEMAND = 137 gpm

Meter size chosen = 2.0 in

Turbine Class II meter per Table 6-1

Sanitary Sewer - Required Sewer Capacity
Project: Everhome Suites - Superior
Section: n/a

Proposed Development

Overal Site Area = A = 1.97 Acres
Residential(Hotel) = 114.0 Units

Average Flow

Residential (hotel)
Flow Factor = 100 Gallons per capita per day
Average Flow = (100 GPD)*(114 Units) = **11,400 GPD**

Total Average Daily Demand= Q_A= 11,400 GPD

Peak Factor

Peak Factor = PF = 3.8/(AADF)^0.17 = 3.8/(11,400/1,000,000)^0.17 = 5.497 Use maximum of 5

Maximum Day Demand with Peak Factor

Total Average Daily Demand = 11,400 GPD = 0.0114 MGD
Maximum Day Demand = 0.0114*5 = 0.057 MGD

Maximum Day Demand = 0.06 MGD

TRAFFIC IMPACT STUDY

For

KT Development
Superior, Colorado

Prepared for:

Entitlement and Engineering Solutions, Inc.
3801 E. Florida Avenue, Suite 425
Denver, Colorado 80210

Prepared by:

SM ROCHA, LLC
TRAFFIC AND TRANSPORTATION CONSULTANTS

8700 Turnpike Drive, Suite 240
Westminster, Colorado 80031
(303) 458-9798

6 South Tejon Street, Suite 618
Colorado Springs, Colorado 80903
(719) 203-6639

Project Manager:
Brandon Wilson, EIT

Project Engineer:
Zac Trotter, EIT

Engineer in Responsible Charge:
Fred Lantz, PE



23-102008

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APPENDIX B LEVEL OF SERVICE DEFINITIONS
APPENDIX C CAPACITY WORKSHEETS

I. Introduction

Project Overview

This traffic impact study is provided as a planning document and addresses the capacity, geometric, and control requirements associated with the development entitled KT Development.

This proposed lodging development consists of a 114-suite hotel. The development is located near the east corner of McCaslin Boulevard and Marshall Road in Superior, Colorado.

Study Area Boundaries

The study area to be examined in this analysis encompasses the intersections of McCaslin Boulevard with the U.S. Highway 36 interchange, Marshall Road, and Main Street and includes proposed site access drives.

Figure 1 illustrates location of the site and study intersections.

Site Description

Land for the development is currently vacant and surrounded by a mix of commercial, residential, recreational, and lodging land uses.

The proposed development is understood to entail the new construction of an all-suites hotel accommodating 114 rooms.

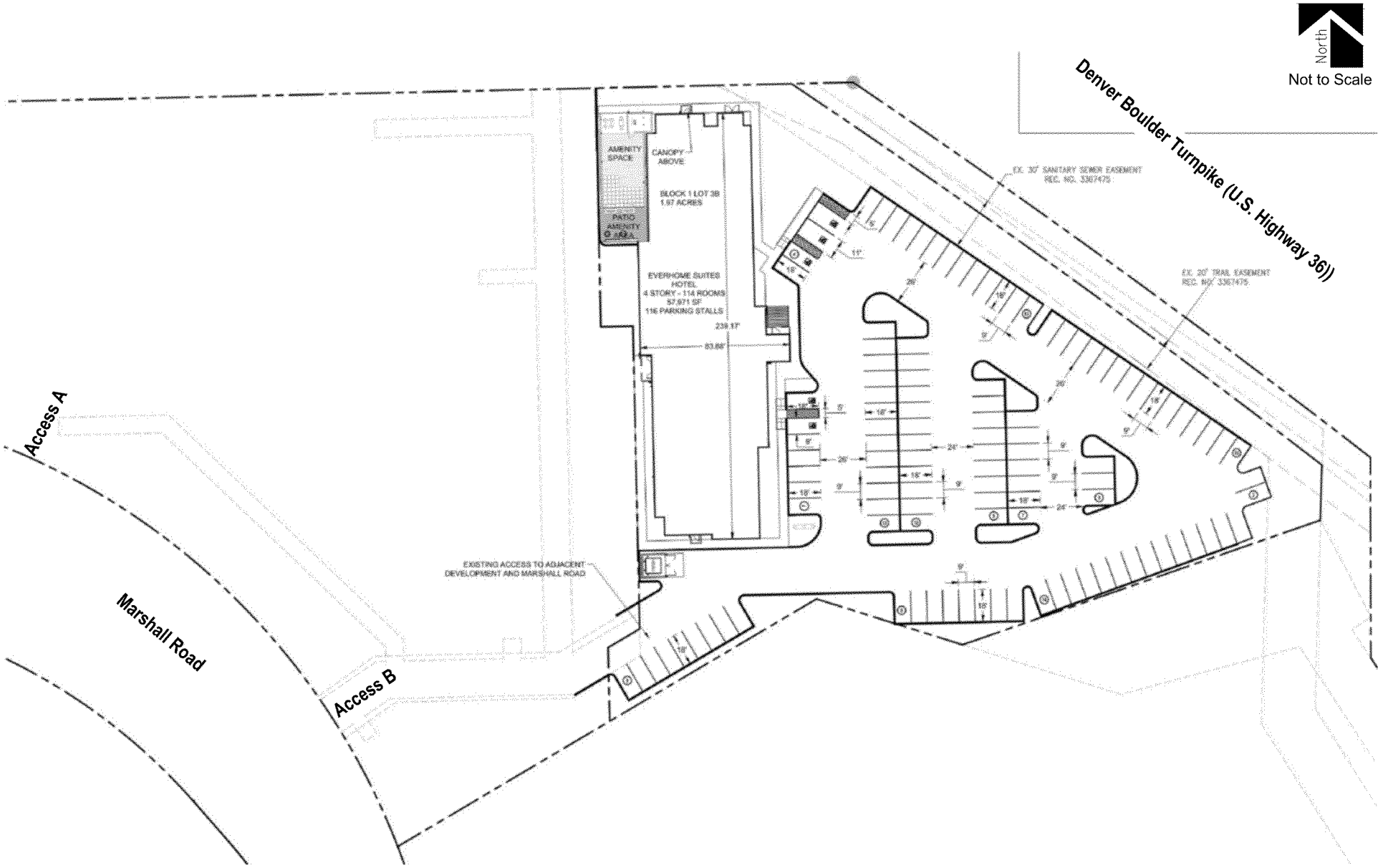
Access to the development is existing and provided via two full-movement access drives onto Marshall Road (referred to as Access A and Access B).

For purposes of this study, it is anticipated that development construction would be completed by end of Year 2025.

General site and access locations are shown on Figure 1.

A conceptual site plan, as prepared by Entitlement and Engineering Solutions, Inc. is shown on Figure 2. This plan is provided for illustrative purposes only.


North
Not to Scale
W Dillon Road
Marshall Road
Sycamore Street
Access B
Access A
Development Site
McCaslin Boulevard
Main Street
Denver Boulder Turnpike (U.S. Highway 36)


North
Not to Scale
Denver Boulder Turnpike (U.S. Highway 36))
AMENITY SPACE
CANOPY ABOVE
PATIO AMENITY
BLOCK 1 LOT 3B
1.97 ACRES
EVERHOME SUITES HOTEL
4 STORY - 114 ROOMS
57,971 SF
116 PARKING STALLS
239.17'
83.68'
EX. 30' SANITARY SEWER EASEMENT REC. NO. 3367475
EX. 20' TRAIL EASEMENT REC. NO. 3367475
EXISTING ACCESS TO ADJACENT DEVELOPMENT AND MARSHALL ROAD
Access A
Access B
Marshall Road

Existing and Committed Surface Transportation Network

Within the study area, Marshall Road is the primary roadway that will accommodate traffic to and from the proposed development. The secondary roadways include McCaslin Boulevard, U.S. Highway 36, and Main Street. A brief description of each roadway, based on the Town's Transportation Plan[1], is provided below:

Marshall Road west of McCaslin Boulevard is generally an east-west state highway having four through lanes (two lanes in each direction) with a combination of shared and exclusive turn lanes at the intersection within the study area. The Colorado Department of Transportation (CDOT) categorizes the adjacent segment of Marshall Road (State Highway 170) as a Non-Rural Arterial (NR-B) and provides a posted speed limit of 35 MPH.

East of McCaslin Boulevard, Marshall Road is generally a north-south collector roadway that provides two to three through lanes with a combination of shared and exclusive turn lanes at the intersections within the study area. Marshall Road provides a posted speed limit of 15 MPH.

McCaslin Boulevard north of Marshall Road is a north-south state highway having six through lanes (three lanes in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. CDOT categorizes the adjacent segment of Marshall Road (State Highway 170) as a Non-Rural Arterial (NR-B) and provides a posted speed limit of 35 MPH.

South of Marshall Road, McCaslin Boulevard is a north-south major arterial roadway providing four to six through lanes (two to three in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. McCaslin Boulevard continues to provide a posted speed limit of 35 MPH.

Main Street is an east-west collector roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersection within the study area. Main Street provides a posted speed limit of 15 MPH.

U.S. Highway 36 (Denver Boulder Turnpike) at McCaslin Boulevard is an existing diverging diamond interchange with U.S. Highway 36 travel below McCaslin Boulevard. The interchange is within CDOT jurisdiction. Eastbound and westbound on/off ramps have a posted advisory speed limit of 45 MPH. The eastbound interchange ramp has four approach lanes and the westbound interchange ramp has two approach lanes with exclusive turn lanes at McCaslin Boulevard.

[1] Transportation Plan 2014 Update, Town of Superior, February 2014.

The study intersections of McCaslin Boulevard with U.S. Highway 36 eastbound ramp, U.S. Highway 36 westbound ramp, and Marshall Road are signalized. The McCaslin Boulevard intersection with Main Street operates as a roundabout. All other study intersections operate under a stop-controlled condition. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more “STOP” signs.

No regional or specific improvements for the above described roadways are known to be planned or committed at this time. The study area roadways appear to be built to their ultimate cross-sections.

II. Existing Traffic Conditions

Morning (AM) and afternoon (PM) peak hour traffic counts were collected at the intersections of McCaslin Boulevard with the U.S. Highway 36 eastbound and westbound on/off ramps and the intersection of Marshall Road and Access A. Counts were collected on October 17, 2023, with AM peak hour counts being collected during the period of 7:00 a.m. to 9:00 a.m. and PM peak hour counts being collected during the period of 4:00 p.m. to 6:00 p.m.

Peak hour traffic counts shown for the intersections of McCaslin Boulevard with Marshall Road and Main Street along with 24-hour traffic volumes on Marshall Road were obtained from the Coal Creek Innovation Park Traffic Impact Analysis[2]. Referenced traffic count data was collected April 5, 2023.

Newly collected and referenced counts representing existing traffic volumes are shown on Figure 3. Existing intersection geometry is shown on Figure 3a. Traffic count data is included for reference in Appendix A.

Existing signal timing parameters for the intersections of McCaslin Boulevard with U.S. Highway 36 eastbound off ramps, U.S. Highway 36 westbound off ramps, and Marshall Road were obtained from the Town of Superior and used throughout this study to the best extent possible in order to remain consistent with existing signal coordination plans. Town signal timing information received is included for reference in Appendix A.

[2] Coal Creek Innovation Park Traffic Impact Analysis, LSC Transportation Consultants, LLC, July 2023.

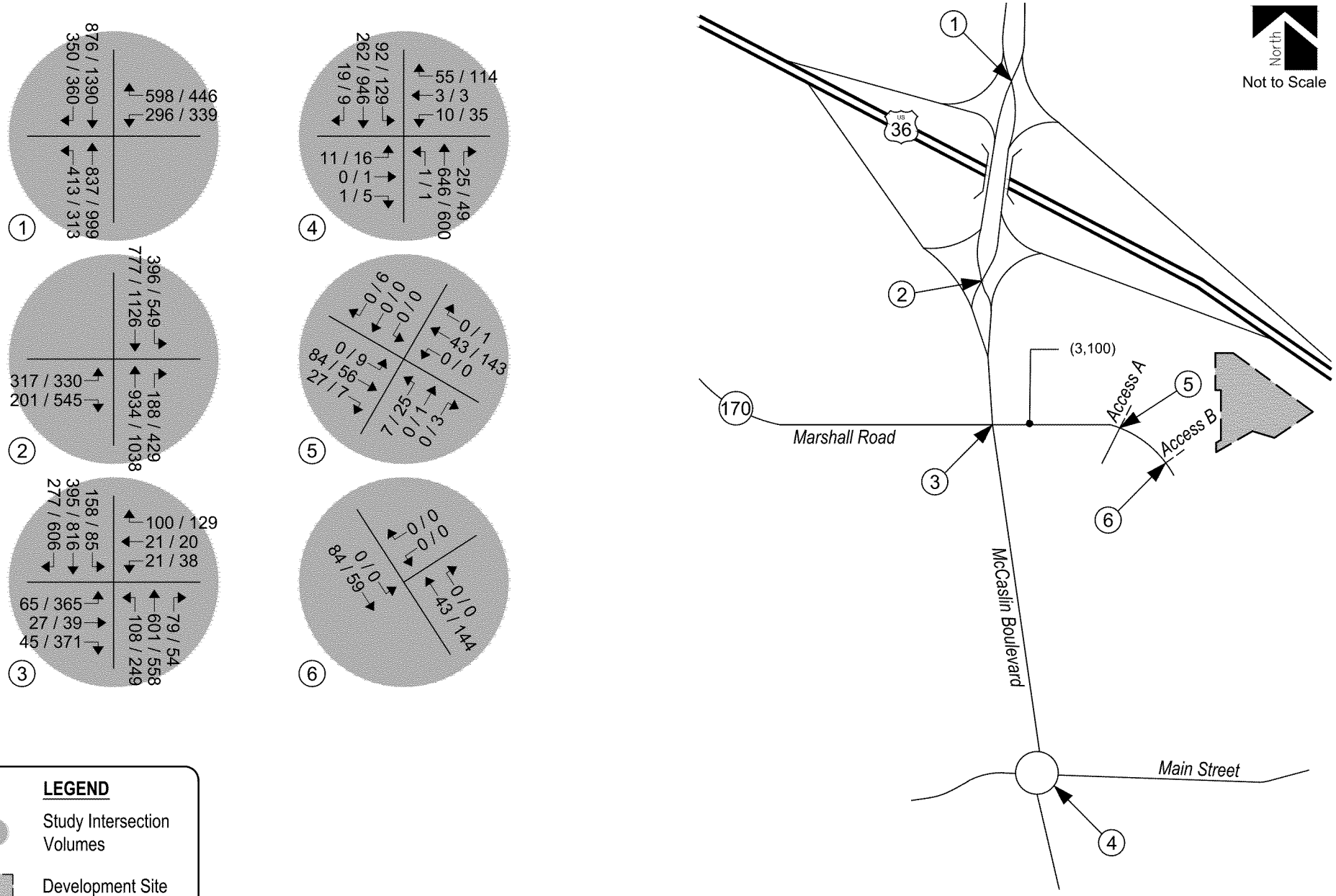


Figure 3
EXISTING TRAFFIC
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic

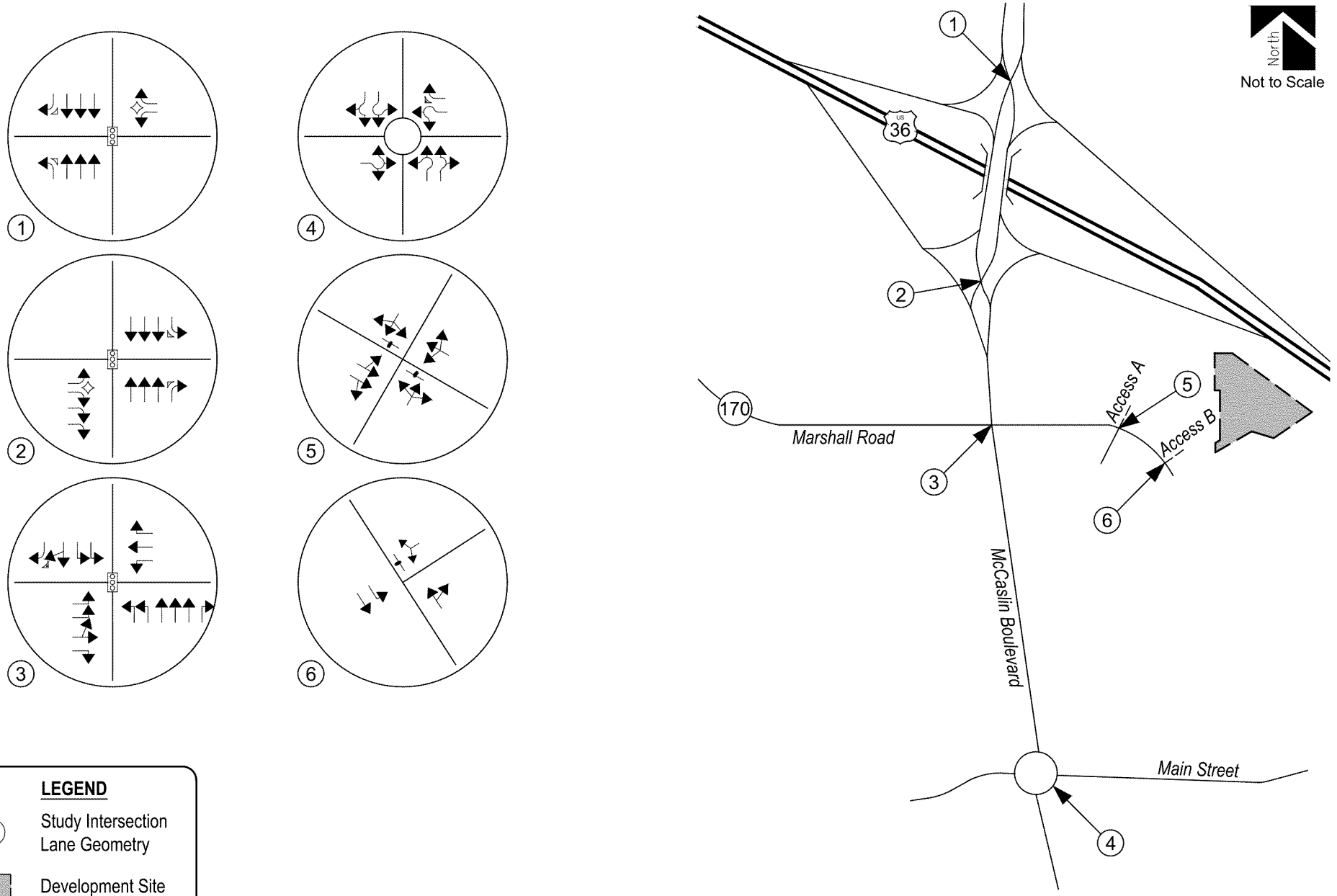


Figure 3a
EXISTING TRAFFIC
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Existing Traffic

The Signalized, Unsignalized, and Roundabout Intersection Analysis techniques, as published in the Highway Capacity Manual (HCM), 6th Edition, by the Transportation Research Board and as incorporated into the SYNCHRO computer program, were used to analyze the study intersections for existing and future traffic conditions. These nationally accepted techniques allow for the determination of intersection level of service (LOS) based on the congestion and delay of each traffic movement for Signalized and Unsignalized intersections and based on the volume to capacity ratio and control delay for each approach for Roundabout intersections.

Level of service is a method of measurement used by transportation professionals to quantify a driver's perception of travel conditions that include travel time, number of stops, and total amount of stopped delay experienced on a roadway network. The HCM categorizes level of service into a range from "A" which indicates little, if any, vehicle delay, to "F" which indicates a level of operation considered unacceptable to most drivers. These levels of service grades with brief descriptions of the operating condition, for unsignalized and signalized intersections, are included for reference in Appendix B and have been used throughout this study.

The level of service analyses results for existing conditions are summarized in Table 1.

Intersection capacity worksheets developed for this study are provided in Appendix C.

Table 1 – Intersection Capacity Analysis Summary – Existing Traffic

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Signalized)	C (24.1)	C (23.5)
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Stop-Controlled)		
Eastbound Left	C	C
McCaslin Boulevard / U.S. 36 Westbound Ramp (Signalized)	C (30.4)	C (28.5)
McCaslin Boulevard / U.S. 36 Westbound Ramp (Stop-Controlled)		
Westbound Left	C	D
McCaslin Boulevard / Marshall Road (Signalized)	A (10.0)	B (16.8)
McCaslin Boulevard / Main Street (Roundabout)		
Eastbound Left, Through and Right	A	A
Westbound Left and Through	A	A
Northbound Left and Through	A	A
Northbound Through and Right	A	A
Southbound Left and Through	A	A
Southbound Through and Right	A	A
Marshall Road / Access A (Stop-Controlled)		
Eastbound Left and Through	A	A
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	A	B
Southbound Left, Through and Right	A	A
Marshall Road / Access B (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Roundabout Intersection: Level of Service
Stop-Controlled Intersection: Level of Service

Existing Traffic Analysis Results

Under existing conditions, operational analysis shows that the signalized intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps have overall operations at LOS C during the morning and the afternoon peak traffic hours.

It is important to note that both on-ramps have a yield-controlled left-turn movement onto McCaslin Boulevard. For purposes of this analysis, said movements were analyzed under stop-control with projected LOS C and D turn movement operations during either peak traffic hour.

Operational analysis shows that the signalized intersection of McCaslin Boulevard and Marshall Road has overall operations at LOS A during the morning peak traffic hour and LOS B during the afternoon peak traffic hour.

The roundabout-controlled intersection of McCaslin Boulevard with Main Street has turning movement operations at LOS A during the morning and the afternoon peak traffic hours.

The unsignalized intersection of Marshall Road with Access A has turn movement operations at LOS A during the morning peak traffic hour and LOS B or better during the afternoon peak traffic hour.

The unsignalized intersection of Marshall Road with Access B has turn movement operations at LOS A during the morning and the afternoon peak traffic hours.

III. Future Traffic Conditions Without Proposed Development

Background traffic is the traffic projected to be on area roadways without consideration of the proposed development. Background traffic includes traffic generated by development of vacant parcels in the area.

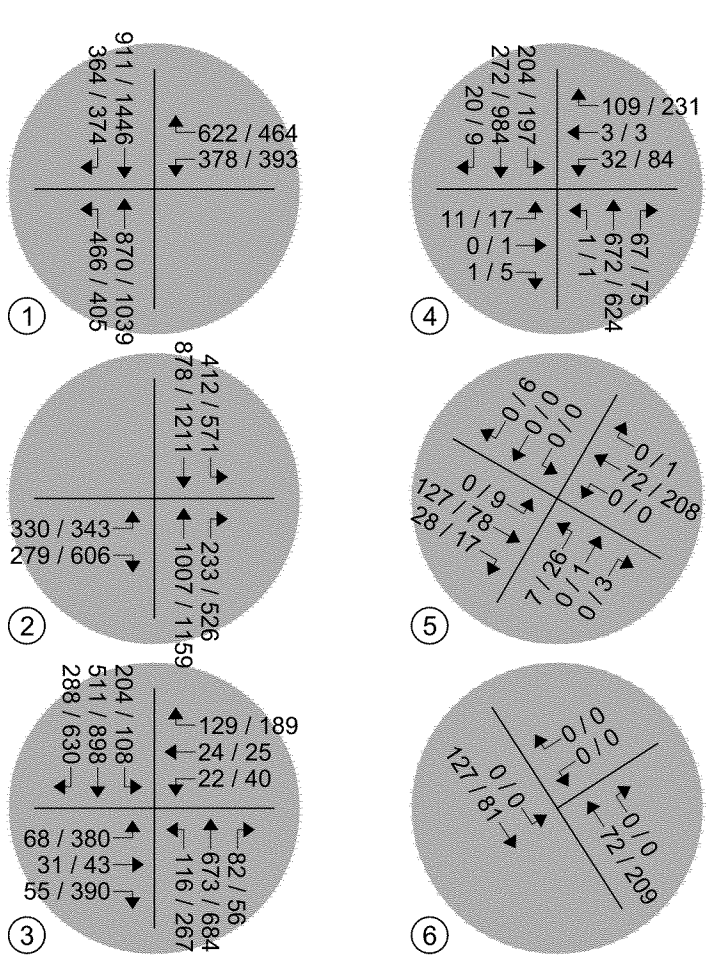
To account for projected increases in background traffic for Years 2025 and 2043, a compounded annual growth rate was determined using historical traffic data provided by CDOT's Online Transportation Information System (OTIS) along the adjacent segment of Marshall Road (State Highway 170) which anticipates a 20-year growth rate between one and two percent. Therefore, in order to provide for a conservative analysis, a growth rate of approximately two percent was applied to existing traffic volumes.

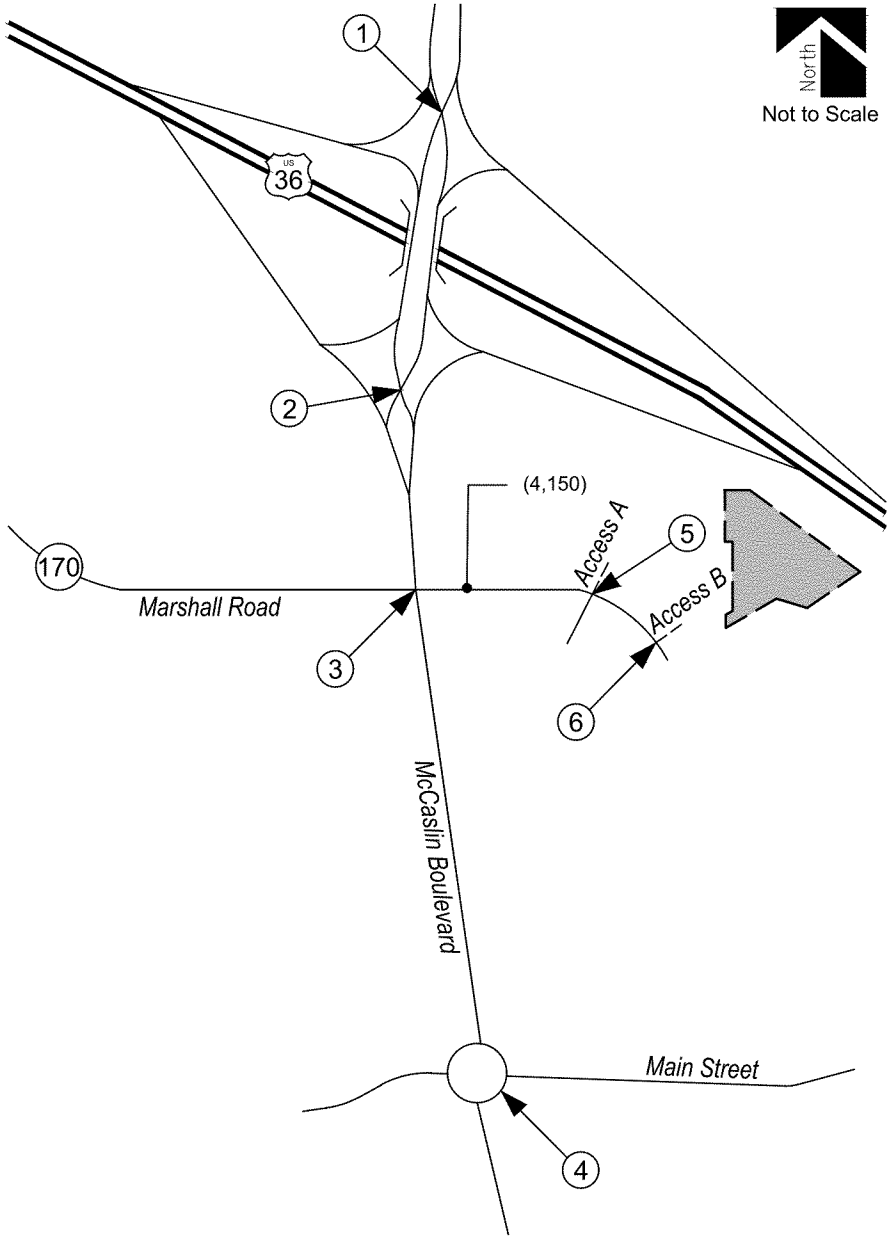
To account for projected traffic from adjacent developments not yet built, trip generations from the Coal Creek Innovation Park Traffic Impact Analysis traffic study were added to background traffic volumes.

Pursuant to the area roadway improvements discussed in Section I, Year 2025 and Year 2043 background traffic conditions assume no roadway improvements to accommodate regional transportation demands. Year 2043 assumes existing signal timing parameters for the intersections of McCaslin Boulevard with U.S. Highway 36 eastbound off ramps, U.S. Highway 36 westbound off ramps, and Marshall Road with optimized intersection splits in effort to better long-term intersection performance.

Projected background traffic volumes and intersection geometry for Year 2025 are shown on Figure 4 and Figure 4a, respectively.

Projected background traffic volumes and intersection geometry for Year 2043 are shown on Figure 5 and Figure 5a, respectively.





LEGEND

Study Intersection Volumes

Development Site

Figure 4
BACKGROUND TRAFFIC - YEAR 2025
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic

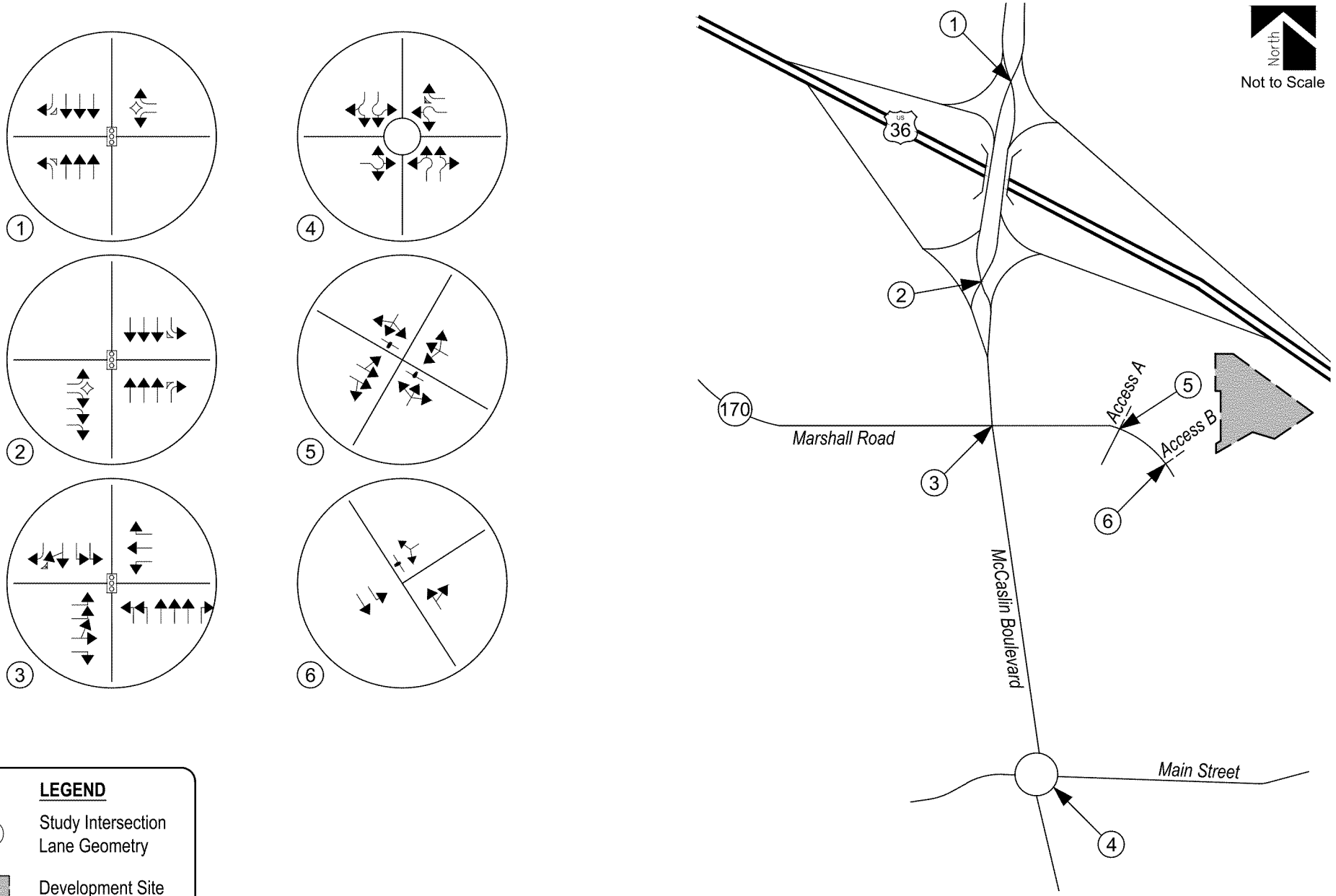


Figure 4a
BACKGROUND TRAFFIC - YEAR 2025
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

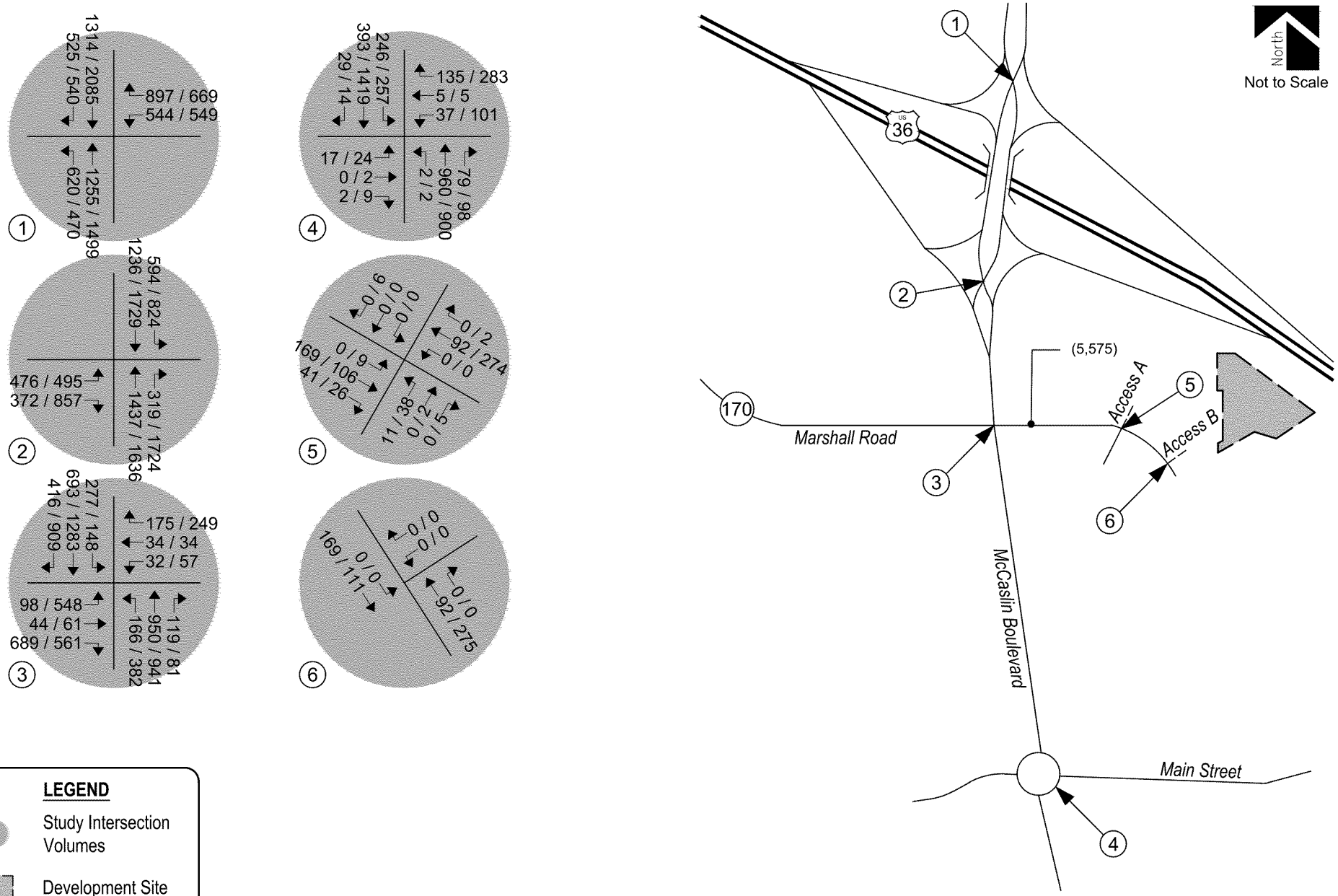


Figure 5
BACKGROUND TRAFFIC - YEAR 2043
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic

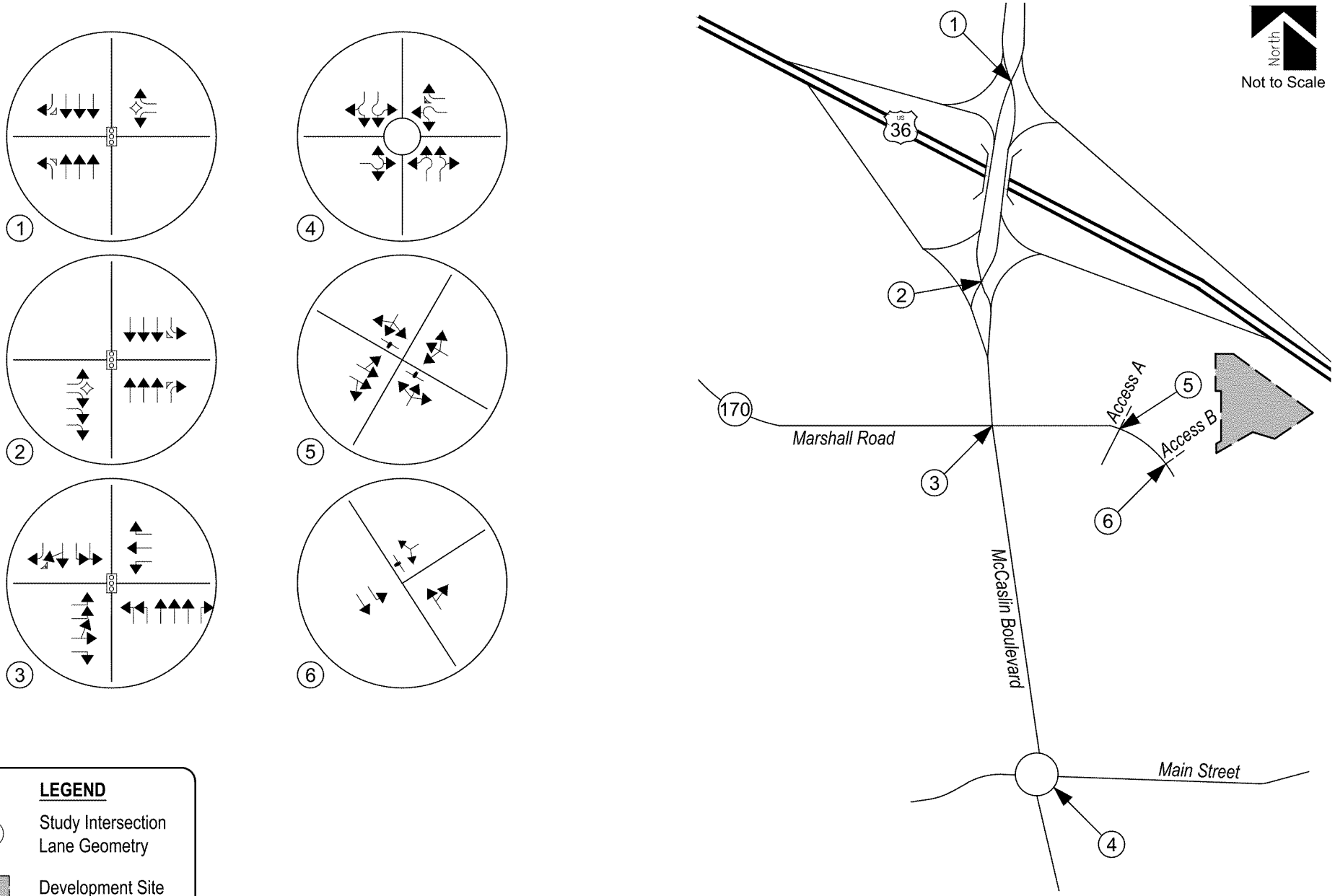


Figure 5a
BACKGROUND TRAFFIC - YEAR 2043
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Background Traffic

As with existing traffic conditions, the operations of study intersections were analyzed under background conditions, without the proposed development, using the SYNCHRO computer program.

Background traffic level of service analysis results for Year 2025 are listed in Table 2. Year 2043 operational results are summarized in Table 3.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2025

INTERSECTION	LEVEL OF SERVICE	
LANE GROUPS	AM PEAK HOUR	PM PEAK HOUR
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Signalized)	C (24.1)	C (22.8)
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Stop-Controlled)		
Eastbound Left	C	C
McCaslin Boulevard / U.S. 36 Westbound Ramp (Signalized)	C (30.2)	C (28.7)
McCaslin Boulevard / U.S. 36 Westbound Ramp (Stop-Controlled)		
Westbound Left	C	F
McCaslin Boulevard / Marshall Road (Signalized)	B (11.1)	B (18.0)
McCaslin Boulevard / Main Street (Roundabout)		
Eastbound Left, Through and Right	A	A
Westbound Left and Through	A	A
Northbound Left and Through	A	A
Northbound Through and Right	A	A
Southbound Left and Through	A	A
Southbound Through and Right	A	A
Marshall Road / Access A (Stop-Controlled)		
Eastbound Left and Through	A	A
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	B	B
Southbound Left, Through and Right	A	A
Marshall Road / Access B (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Roundabout Intersection: Level of Service
Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2025

Year 2025 background traffic analysis indicates that the signalized intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps have overall operations at LOS C during the morning and the afternoon peak traffic hours.

The stop-controlled intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps have turn movement operations at LOS C during the morning and afternoon peak traffic hours. Exceptions would include the westbound left turn movement which operates at LOS F during the PM peak traffic hour. The LOS F operation is attributed to the through traffic volume along McCaslin Boulevard and the stop-controlled nature of analysis technique applied. Considering how the westbound left turn movement operates with yield-controlled, turn movement operations are likely better than that analyzed throughout this study.

Operational analysis shows that the signalized intersection of McCaslin Boulevard and Marshall Road has overall operations at LOS B during the morning and the afternoon peak traffic hours.

The roundabout-controlled intersection of McCaslin Boulevard with Main Street has turning movement operations at LOS A during both the morning and the afternoon peak traffic hours.

The unsignalized intersection of Marshall Road with Access A has turn movement operations at LOS B or better during the morning and the afternoon peak traffic hours.

The unsignalized intersection of Marshall Road with Access B has turn movement operations at LOS A during the morning and the afternoon peak traffic hours.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along McCaslin Boulevard will tend to create additional gaps in the traffic stream for turning movements at McCaslin Boulevard and will most likely provide mitigation to the LOS F operation projected during the afternoon peak traffic hour.

Table 3 – Intersection Capacity Analysis Summary – Background Traffic – Year 2043

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Signalized)	C (24.1)	C (30.2)
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Stop-Controlled)		
Eastbound Left	F	F
McCaslin Boulevard / U.S. 36 Westbound Ramp (Signalized)	C (21.6)	C (28.1)
McCaslin Boulevard / U.S. 36 Westbound Ramp (Stop-Controlled)		
Westbound Left	F	F
McCaslin Boulevard / Marshall Road (Signalized)	C (29.5)	C (29.0)
McCaslin Boulevard / Main Street (Roundabout)		
Eastbound Left, Through and Right	A	C
Westbound Left and Through	A	A
Northbound Left and Through	B	A
Northbound Through and Right	B	A
Southbound Left and Through	A	B
Southbound Through and Right	A	C
Marshall Road / Access A (Stop-Controlled)		
Eastbound Left and Through	A	B
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	B	A
Southbound Left, Through and Right	A	A
Marshall Road / Access B (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Roundabout Intersection: Level of Service
Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2043

By Year 2043 and without the proposed development, the study intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps have overall operations at LOS C during the morning and the afternoon peak traffic hours.

The stop-controlled intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps projects left turn operations at LOS F during the morning and afternoon peak traffic hours. The LOS F operations are attributed to the through traffic volume along McCaslin Boulevard and the stop-controlled nature of analysis technique applied. Considering how the westbound left turn movement operates with yield-controlled, turn movement operations are likely better than that analyzed throughout this study.

Operational analysis shows that the signalized intersection of McCaslin Boulevard and Marshall Road anticipates overall operations at LOS C during the morning and the afternoon peak traffic hours.

The roundabout-controlled intersection of McCaslin Boulevard with Main Street predicts turning movement operations at or better than LOS B during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour.

The unsignalized intersection of Marshall Road with Access A expects turn movement operations at LOS B or better during the morning and the afternoon peak traffic hours.

The unsignalized intersection of Marshall Road with Access B anticipates turn movement operations at LOS A during the morning and afternoon peak traffic hours.

It is again noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along McCaslin Boulevard will tend to create additional gaps in the traffic stream for turning movements at U.S. Highway 36 eastbound and westbound ramps and will most likely provide mitigation to the LOS F operation projected during both peak traffic hours. It is also emphasized that, for purposes of this analysis, the HCM's TWSC technique was applied to the eastbound and westbound left turn movements for the off-ramps since HCM does not provide a yield-controlled technique.

IV. Proposed Project Traffic

Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were applied to the proposed land use in order to estimate average daily traffic (ADT), AM Peak Hour, and PM Peak Hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

The ITE land use code 311 (All Suites Hotel) was used for estimating trip generation because of its conservative rates and best fit to the proposed land use description.

Trip generation rates used in this study are presented in Table 4.

Table 4 – Trip Generation Rates

ITE			TRIP GENERATION RATES						
			24	AM PEAK HOUR			PM PEAK HOUR		
CODE	LAND USE	UNIT	HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
311	All Suites Hotel	RMS	4.40	0.18	0.16	0.34	0.18	0.18	0.36

Key: RMS = Rooms.
Note: All data and calculations above are subject to being rounded to nearest value.

Table 5 illustrates projected ADT, AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the proposed development upon build-out.

Table 5 – Trip Generation Summary

ITE			TOTAL TRIPS GENERATED						
			24	AM PEAK HOUR			PM PEAK HOUR		
CODE	LAND USE	SIZE	HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
311	All Suites Hotel	114 RMS	502	21	18	39	20	21	41
		Total:	*502*	*21*	*18*	*39*	*20*	*21*	*41*

Key: RMS = Rooms.
Note: All data and calculations above are subject to being rounded to nearest value.

Upon build-out, Table 5 illustrates that the proposed development has the potential to generate approximately 502 daily vehicle trips with 39 of those occurring during the morning peak hour and 41 during the afternoon peak hour.

Adjustments to Trip Generation Rates

A development of this type is not likely to attract trips from within area land uses nor pass-by or diverted link trips from the adjacent roadway system, therefore no trip reduction was taken in this analysis.

Trip Distribution

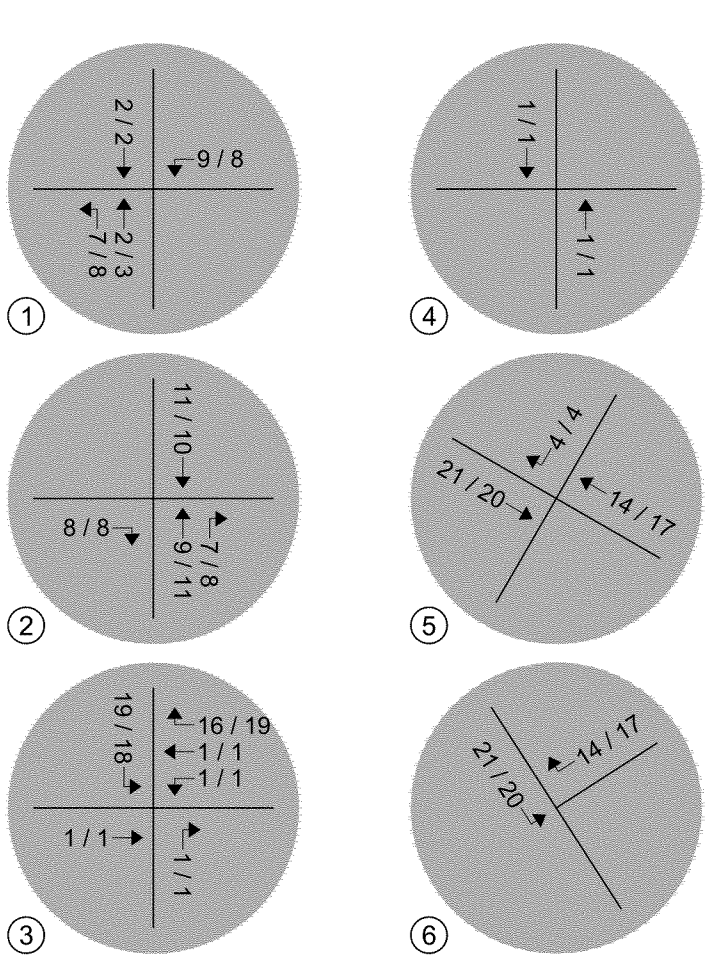
The overall directional distribution of site-generated traffic was determined based on the location of development site within the Town, proposed and existing area land uses, allowed turning movements, and available roadway network.

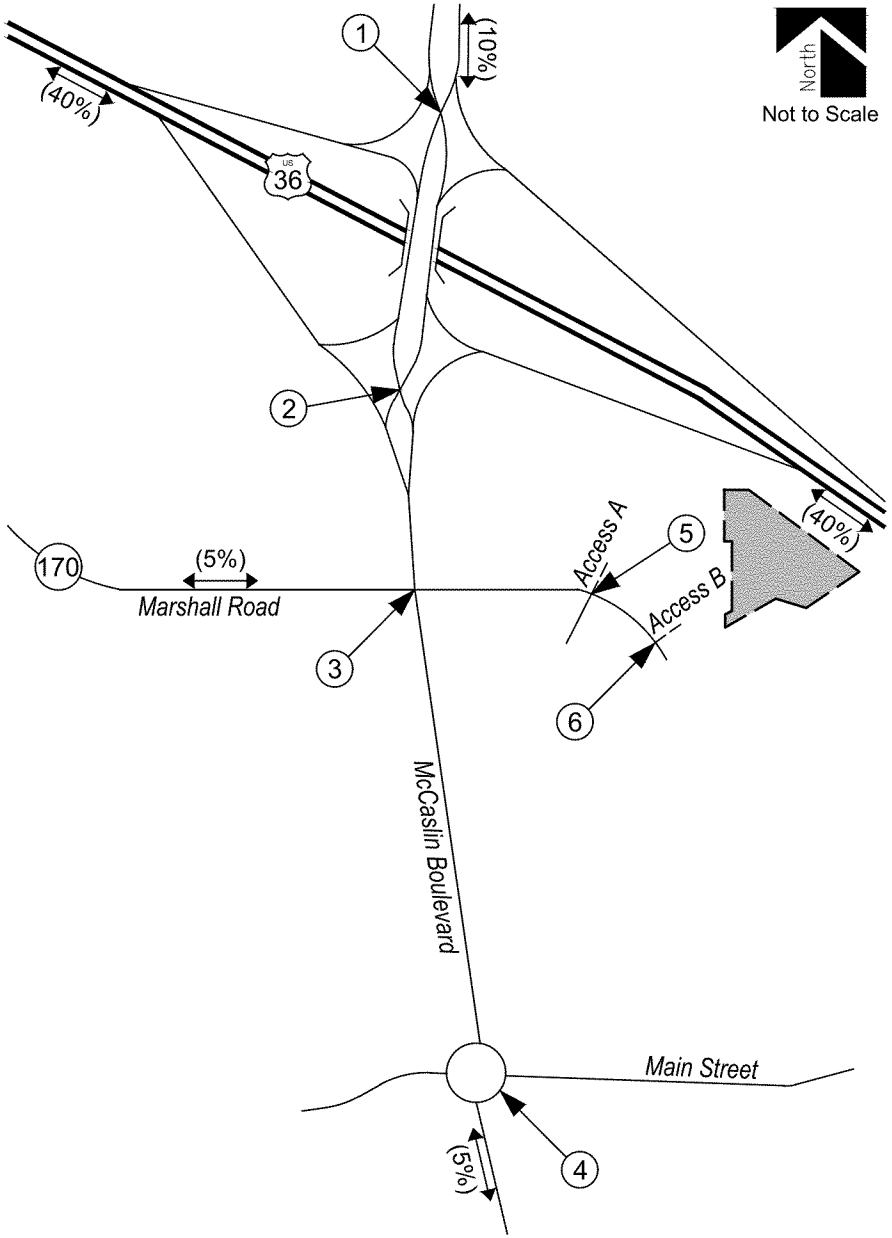
Overall trip distribution patterns for the development are shown on Figure 6.

Trip Assignment

Traffic assignment is how generated and distributed vehicle trips are expected to be loaded onto the available roadway network.

Applying trip distribution patterns to site-generated traffic provides the overall site-generated trip assignments shown on Figure 6.





LEGEND

Study Intersection Volumes

Development Site

Figure 6
SITE DEVELOPMENT DISTRIBUTION
(%) : Overall
SITE-GENERATED TRIPS
AM / PM Peak Hour

V. Future Traffic Conditions With Proposed Developments

Total traffic is the traffic projected to be on area roadways with consideration of the proposed development. Total traffic includes background traffic projections for Years 2025 and 2043 with consideration of site-generated traffic. For analysis purposes, it was assumed that development construction would be completed by end of Year 2025.

Pursuant to area roadway improvement discussions provided in Section III, Year 2025 and Year 2043 total traffic conditions assume no roadway improvements to accommodate regional transportation demands. Roadway improvements associated with site development are expected to be limited to site access and frontage as required by the governing agency.

Projected Year 2025 total traffic volumes and intersection geometry are shown in Figure 7 and Figure 7a, respectively.

Figure 8 and Figure 8a shows projected total traffic volumes and intersection geometry for Year 2043, respectively.

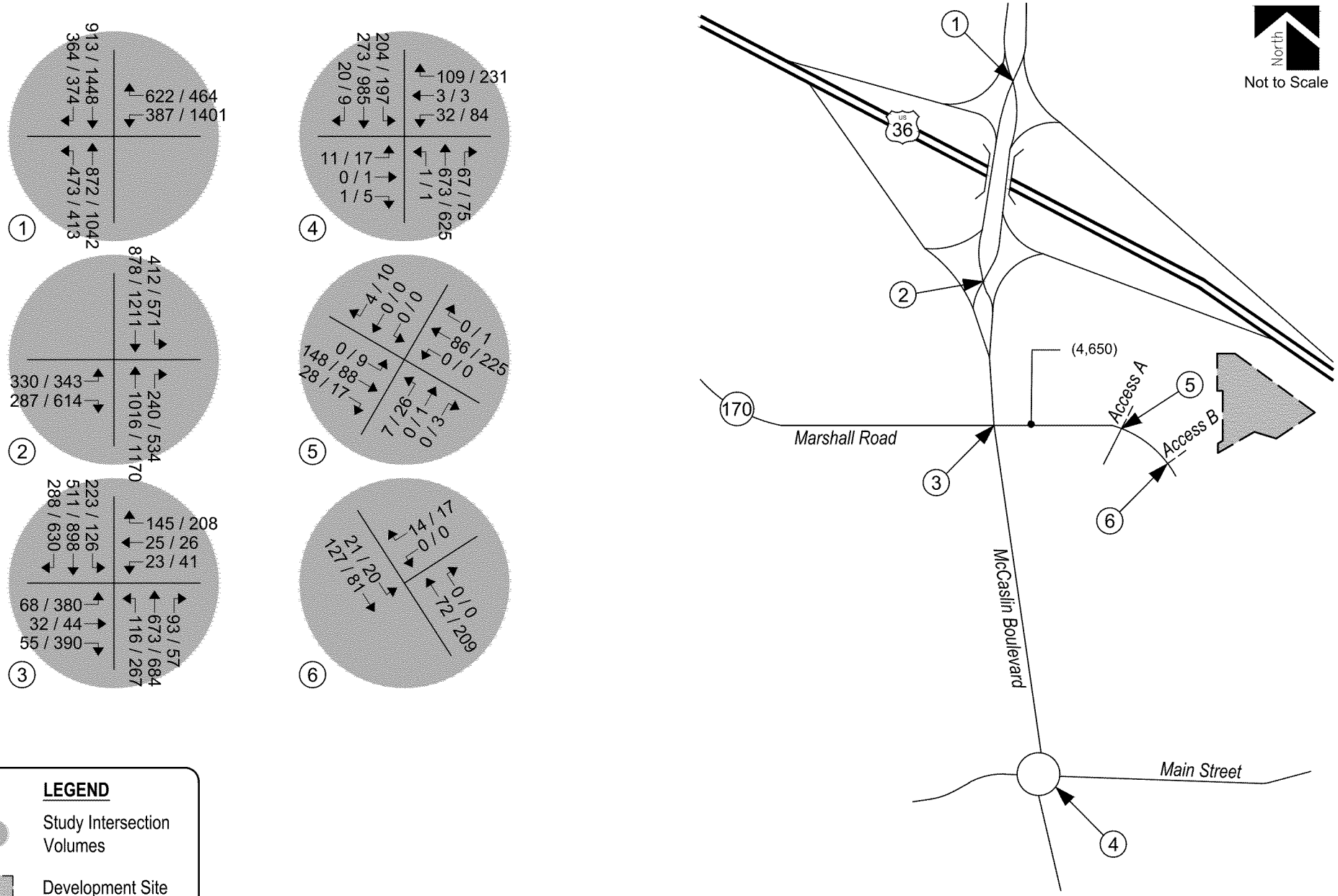


Figure 7
TOTAL TRAFFIC - YEAR 2025
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic

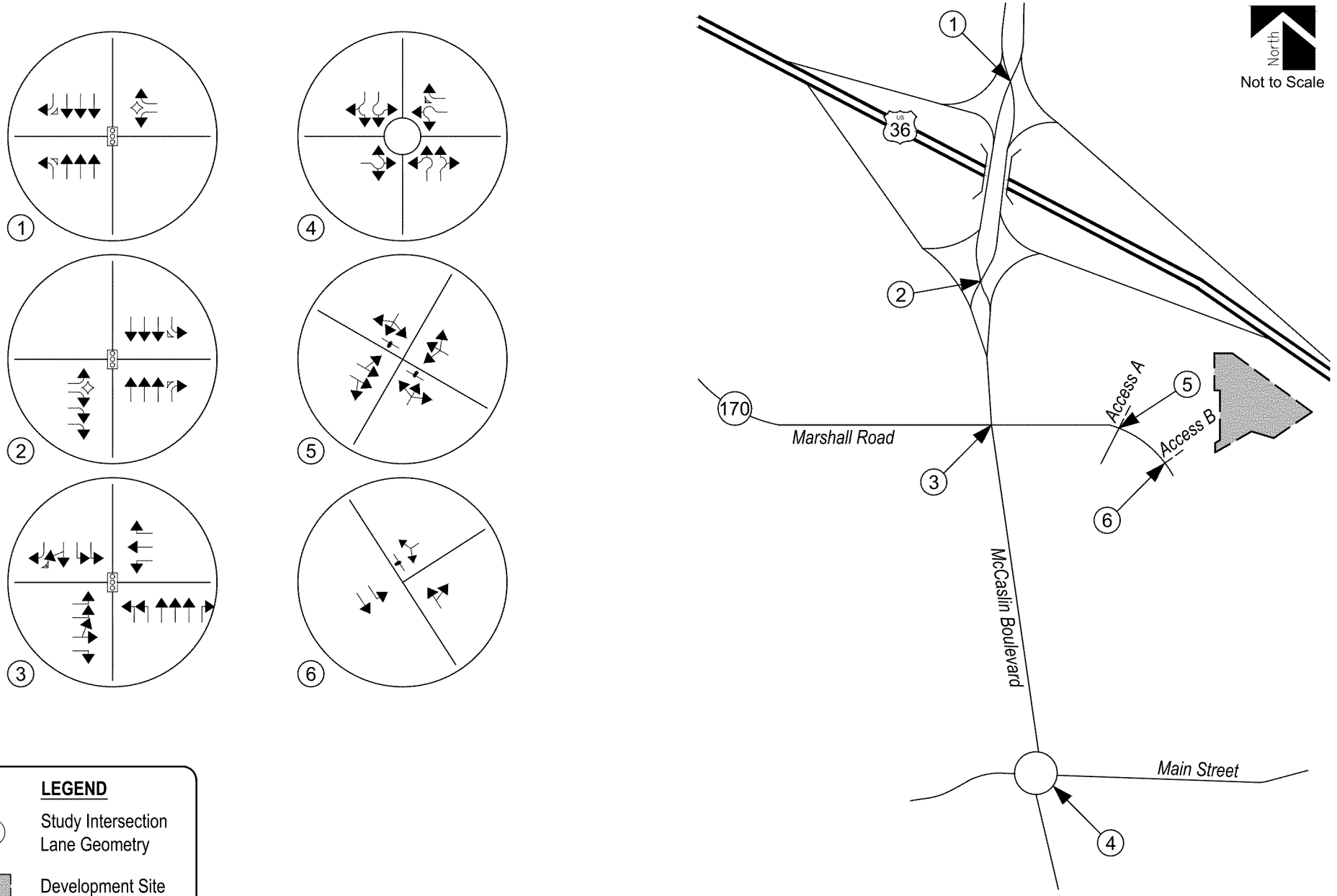


Figure 7a
TOTAL TRAFFIC - YEAR 2025
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

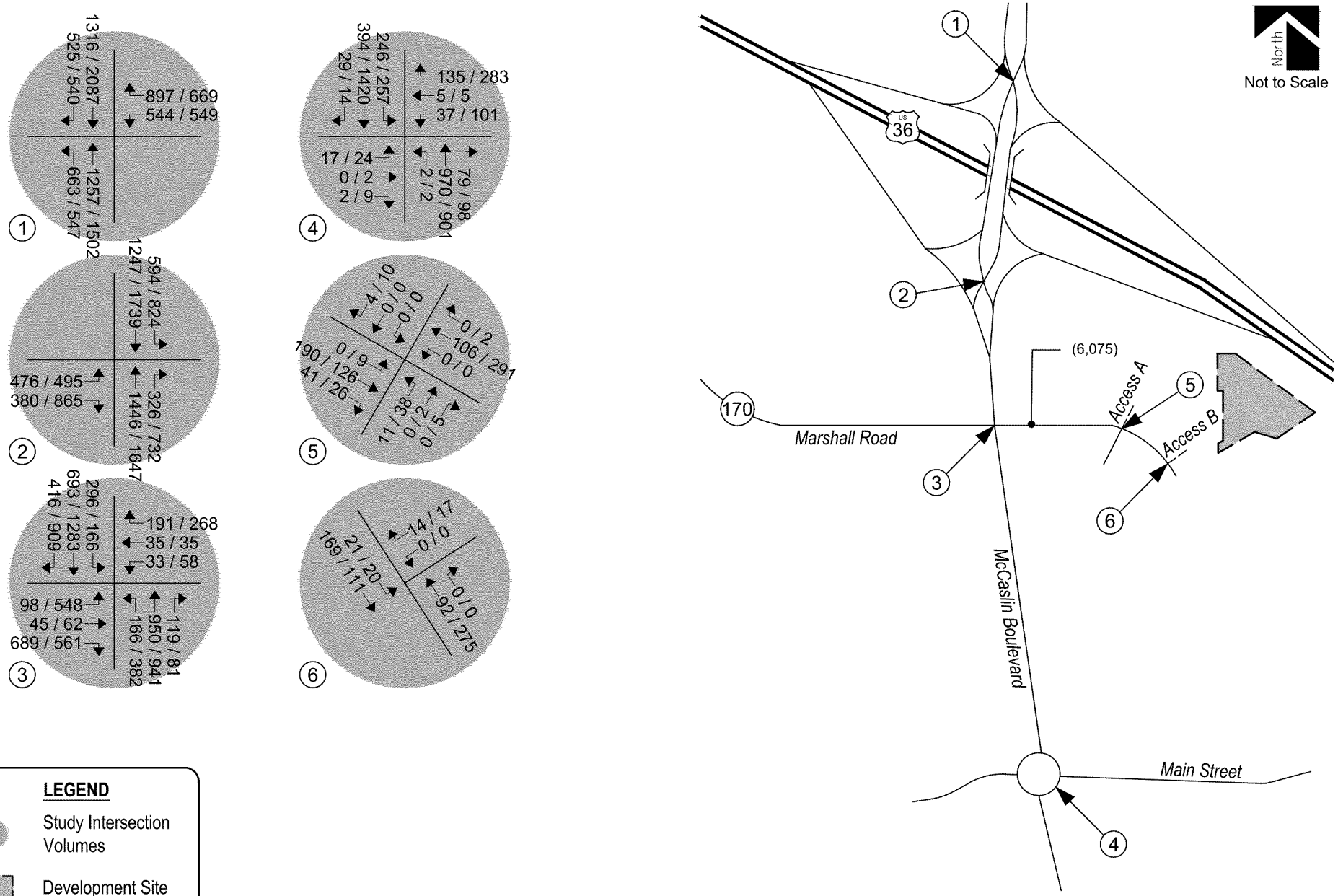


Figure 8
TOTAL TRAFFIC - YEAR 2043
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic

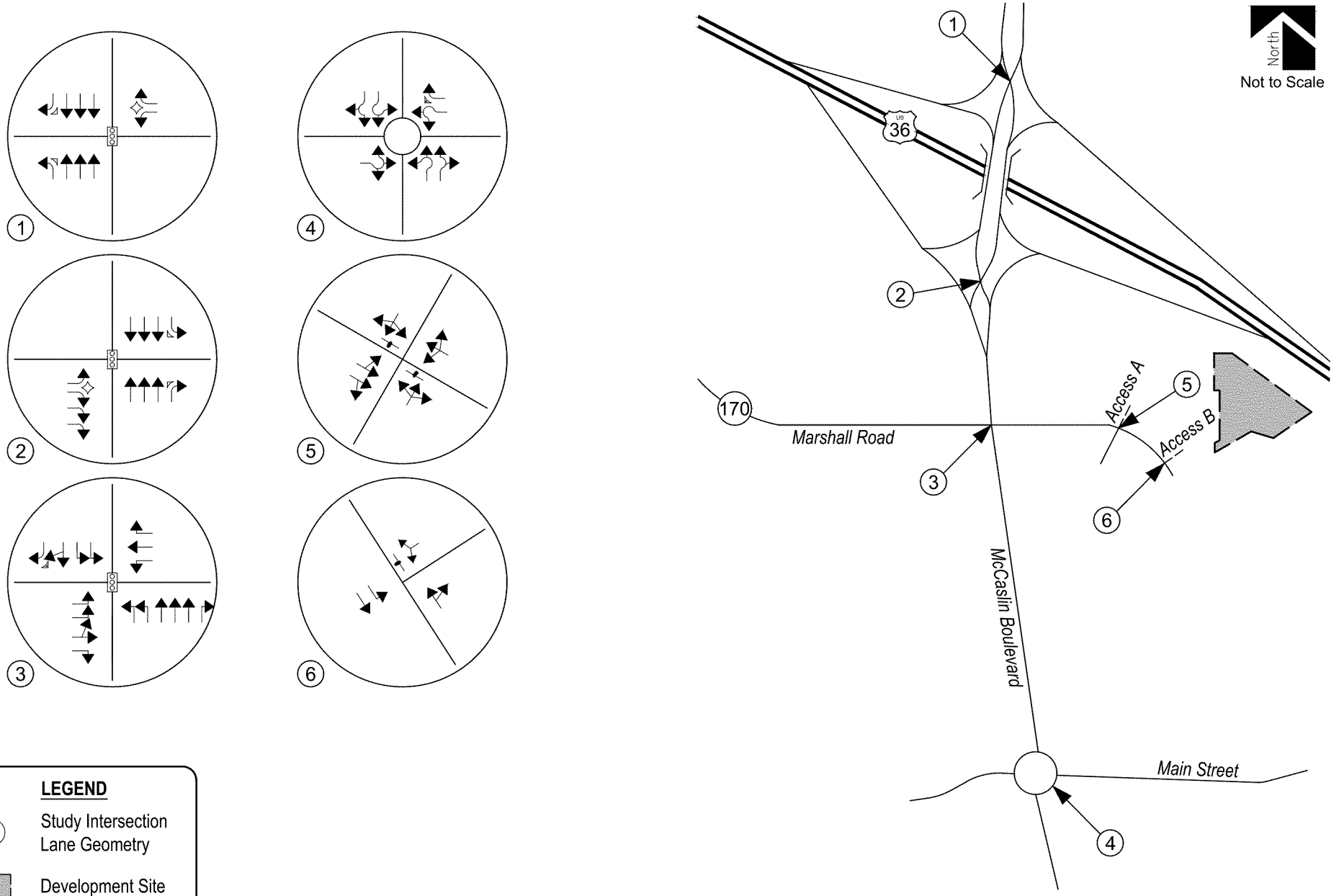


Figure 8a
TOTAL TRAFFIC - YEAR 2043
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

VI. Project Impacts

The analyses and procedures described in this study were performed in accordance with the latest HCM and are based upon the worst-case conditions that occur during a typical weekday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday operations only.

Peak Hour Intersection Levels of Service – Total Traffic

As with background traffic, the operations of the study intersections were analyzed under projected total traffic conditions using the SYNCHRO computer program. Total traffic level of service analysis results for Years 2025 and 2043 are summarized in Table 6 and Table 7, respectively.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 6 – Intersection Capacity Analysis Summary – Total Traffic – Year 2025

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Signalized)	C (24.2)	C (22.8)
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Stop-Controlled)		
Eastbound Left	C	D
McCaslin Boulevard / U.S. 36 Westbound Ramp (Signalized)	C (30.3)	C (28.7)
McCaslin Boulevard / U.S. 36 Westbound Ramp (Stop-Controlled)		
Westbound Left	C	F
McCaslin Boulevard / Marshall Road (Signalized)	B (11.3)	B (18.1)
McCaslin Boulevard / Main Street (Roundabout)		
Eastbound Left, Through and Right	A	B
Westbound Left and Through	A	A
Northbound Left and Through	A	A
Northbound Through and Right	A	A
Southbound Left and Through	A	A
Southbound Through and Right	A	A
Marshall Road / Access A (Stop-Controlled)		
Eastbound Left and Through	A	B
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	B	A
Southbound Left, Through and Right	A	A
Marshall Road / Access B (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Roundabout Intersection: Level of Service
Stop-Controlled Intersection: Level of Service

Table 7 – Intersection Capacity Analysis Summary – Total Traffic – Year 2043

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Signalized)	C (21.7)	C (28.2)
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Stop-Controlled)		
Eastbound Left	F	F
McCaslin Boulevard / U.S. 36 Westbound Ramp (Signalized)	C (24.2)	C (30.4)
McCaslin Boulevard / U.S. 36 Westbound Ramp (Stop-Controlled)		
Westbound Left	F	F
McCaslin Boulevard / Marshall Road (Signalized)	C (30.9)	C (29.8)
McCaslin Boulevard / Main Street (Roundabout)		
Eastbound Left, Through and Right	A	C
Westbound Left and Through	A	A
Northbound Left and Through	B	B
Northbound Through and Right	B	A
Southbound Left and Through	A	B
Southbound Through and Right	A	C
Marshall Road / Access A (Stop-Controlled)		
Eastbound Left and Through	A	B
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	B	A
Southbound Left, Through and Right	A	A
Marshall Road / Access B (Stop-Controlled)		
Westbound Left and Right	A	B
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Roundabout Intersection: Level of Service
Stop-Controlled Intersection: Level of Service

Total Traffic Analysis Results Upon Development Build-Out

Table 7 illustrates how, by Year 2043 and upon development build-out, the signalized intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps have overall operations at LOS C during the morning and the afternoon peak traffic hours.

The stop-controlled intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps are projected to have turning movement operations at LOS F for the morning and afternoon peak traffic hours. The LOS F operations continue to be attributed to the through traffic volume along McCaslin Boulevard and the stop-controlled nature of the analysis technique applied. Considering how the westbound left turn movement operates with yield-control, turn movement operations are likely better than that analyzed throughout this study.

The signalized intersection of McCaslin Boulevard with Marshall Road is projected to have morning peak traffic hour operations at LOS C during the morning and afternoon peak traffic hours.

The roundabout-controlled intersection of McCaslin Boulevard with Main Street is projected to have turning movement operations at LOS B or better for the morning peak traffic hour and LOS C or better for the afternoon peak traffic hour.

The stop-controlled intersection of Marshall Road with Access A is projected to have turning movement operations at LOS B or better for the morning and afternoon peak traffic hours.

The stop-controlled intersection of Marshall Road with Access B is projected to have turning movement operations at LOS A during the morning peak traffic hour and LOS B or better for the afternoon peak traffic hour.

As with background traffic conditions, it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along McCaslin Boulevard will tend to create additional gaps in the traffic stream for turning movements at U.S. Highway 36 eastbound and westbound ramps and will most likely provide mitigation to the LOS F operation projected during both peak traffic hours. It is again emphasized that, for purposes of this analysis, the HCM's TWSC technique was applied to the eastbound and westbound left turn movements for the off-ramps since HCM does not provide a yield-controlled technique.

These intersection operations are similar to background conditions.

VII. Conclusion

This traffic impact study addressed the capacity, geometric, and control requirements associated with the development entitled KT Development. This proposed lodging development consists of a 114-suite hotel. The proposed development is understood to entail the new construction of an accommodating 114 rooms. The development is located near the east corner of McCaslin Boulevard in Superior, Colorado.

The study area examined in this analysis encompassed McCaslin Boulevard with U.S. Highway 36, Marshall Road, and Main Street and the intersections of Marshall Road with Access A and Access B.

Analysis was conducted for critical AM Peak Hour and PM Peak Hour traffic operations for existing traffic conditions, Year 2025 and Year 2043 background traffic conditions, and Year 2025 and Year 2043 total traffic conditions.

Under existing conditions, operational analysis shows that the signalized intersections within the study area have overall operations at LOS C or better during the morning and the afternoon peak traffic hours. The roundabout-controlled intersection of McCaslin Boulevard with Main Street has turning movement operations at LOS A during the morning and the afternoon peak traffic hours. The stop-controlled intersections within the study area have turn movement operations at or better than LOS D during both the morning and afternoon peak traffic hours.

Year 2025 background traffic analysis indicates that the signalized intersections within the study area continue to operate at LOS C or better during the morning and the afternoon peak traffic hours. The roundabout-controlled intersection of McCaslin Boulevard with Main Street continues to project turning movement operations at LOS A during both the morning and the afternoon peak traffic hours. The stop-controlled intersections within the study area expect turning movement operations at or better than LOS D during either peak traffic hour. Exceptions include the westbound left turn movement of McCaslin Boulevard and U.S. Highway 36 westbound off ramp which operates at LOS F during the PM peak traffic hour and the stop-controlled nature of analysis techniques applied. Considering how the westbound left turn movement operates with yield-control, turn movement operations are likely better than expected.

By Year 2043 and without the proposed development, the signalized intersections anticipate LOS operations at LOS C during either peak traffic hour. The roundabout-controlled intersection of McCaslin Boulevard with Main Street predicts turning movement operations at or better than LOS C during the morning and afternoon peak traffic hours. The stop-controlled intersection within the study area project turning movement operations at or better than LOS C. Exceptions would include the left turn movements onto McCaslin Boulevard from U.S. Highway 36 eastbound and westbound ramps. The LOS F operations are attributed to the through traffic volume along McCaslin Boulevard and the stop-controlled nature of analysis technique applied. Considering how the westbound left turn movement operates with yield-control, turn movement operations are likely better than that analyzed throughout this traffic study.

It is again noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. The upstream signal controls along McCaslin Boulevard will tend to create additional gaps in the traffic stream for turning movements at U.S. Highway 36 eastbound and westbound ramps and will most likely provide mitigation to the LOS F operation projected during both peak traffic hours. It is also emphasized that, for purposes of this analysis, the HCM's TWSC technique was applied to the eastbound and westbound left turn movement for the off-ramps since HCM does not provide a yield-controlled technique.

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no negative impact to traffic operations for the existing and surrounding roadway system assumed within this analysis. With all conservative assumptions defined in this analysis, the study intersections are projected to operate at future levels of service comparable to Year 2043 background traffic conditions. Proposed site accesses have long-term operations at LOS B or better during peak traffic periods and upon build-out.

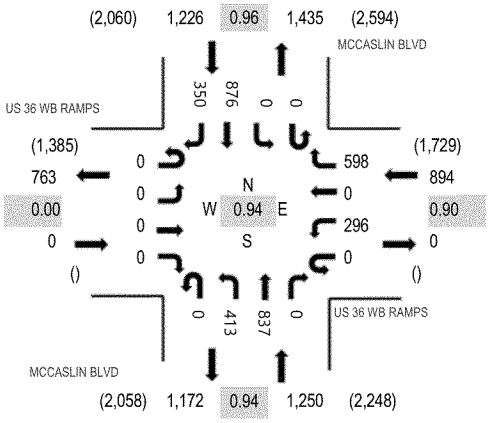
APPENDIX A

Traffic Count Data
Signal Timing Information

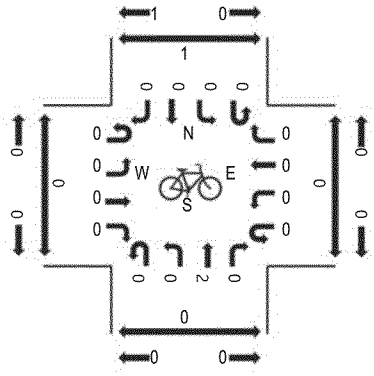
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 MCCASLIN BLVD & US 36 WB RAMPS AM
Date: Tuesday, October 17, 2023
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

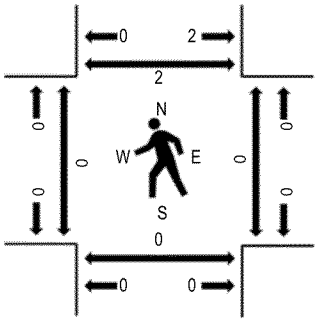
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

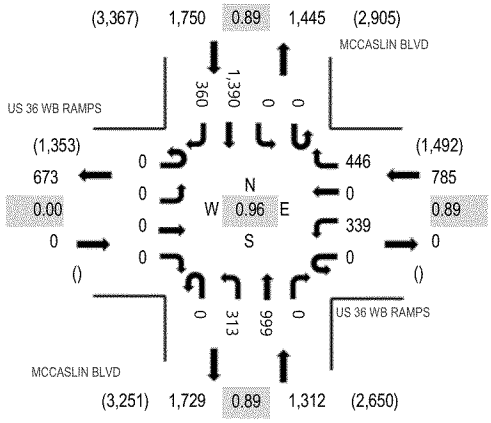
Traffic Counts - Motorized Vehicles

Interval Start Time	US 36 WB RAMPS Eastbound				US 36 WB RAMPS Westbound				MCCASLIN BLVD Northbound				MCCASLIN BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	102	0	121	0	60	112	0	0	0	93	46	534	2,736	0	0	0	0
7:15 AM	0	0	0	0	0	78	0	125	0	84	129	0	0	0	132	57	605	3,026	0	0	0	0
7:30 AM	0	0	0	0	0	67	0	121	0	129	189	0	0	0	110	82	698	3,273	0	0	0	1
7:45 AM	0	0	0	0	0	73	0	177	0	114	217	0	0	0	231	87	899	3,370	0	0	0	0
8:00 AM	0	0	0	0	0	69	0	162	0	97	194	0	0	0	207	95	824	3,301	0	0	0	0
8:15 AM	0	0	0	0	0	83	0	147	0	108	195	0	0	0	243	76	852		0	0	0	0
8:30 AM	0	0	0	0	0	71	0	112	0	94	231	0	0	0	195	92	795		0	0	0	2
8:45 AM	0	0	0	0	0	73	0	148	0	81	214	0	0	0	231	83	830		0	0	0	1
Count Total	0	0	0	0	0	616	0	1,113	0	767	1,481	0	0	0	1,442	618	6,037		0	0	0	4
Peak Hour	0	0	0	0	0	296	0	598	0	413	837	0	0	0	876	350	3,370		0	0	0	2

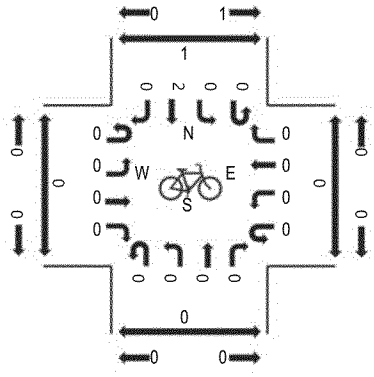
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 MCCASLIN BLVD & US 36 WB RAMPS PM
Date: Tuesday, October 17, 2023
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

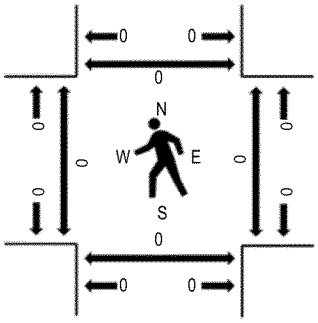
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

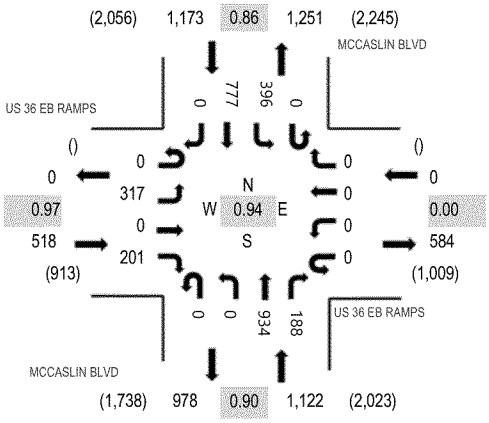
Traffic Counts - Motorized Vehicles

Interval Start Time	US 36 WB RAMPS Eastbound				US 36 WB RAMPS Westbound				MCCASLIN BLVD Northbound				MCCASLIN BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	62	0	95	0	84	252	0	0	0	310	101	904	3,767	0	0	0	1
4:15 PM	0	0	0	0	0	83	0	121	0	79	231	0	0	0	385	108	1,007	3,847	0	0	0	0
4:30 PM	0	0	0	0	0	81	0	88	0	84	253	0	0	0	312	84	902	3,807	0	0	0	0
4:45 PM	0	0	0	0	0	98	0	123	0	64	239	0	0	0	354	76	954	3,845	0	0	0	0
5:00 PM	0	0	0	0	0	77	0	114	0	86	276	0	0	0	339	92	984	3,742	0	0	0	0
5:15 PM	0	0	0	0	0	78	0	116	0	78	241	0	0	0	351	103	967		0	0	0	0
5:30 PM	0	0	0	0	0	76	0	94	0	82	303	0	0	0	290	95	940		0	0	0	0
5:45 PM	0	0	0	0	0	67	0	119	0	58	240	0	0	0	288	79	851		0	0	0	0
Count Total	0	0	0	0	0	622	0	870	0	615	2,035	0	0	0	2,629	738	7,509		0	0	0	1
Peak Hour	0	0	0	0	0	339	0	446	0	313	999	0	0	0	1,390	360	3,847		0	0	0	0

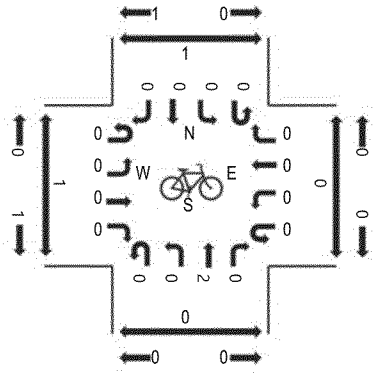
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 MCCASLIN BLVD & US 36 EB RAMPS AM
Date: Tuesday, October 17, 2023
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

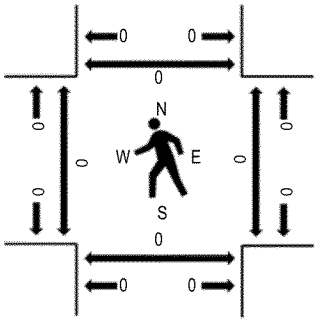
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

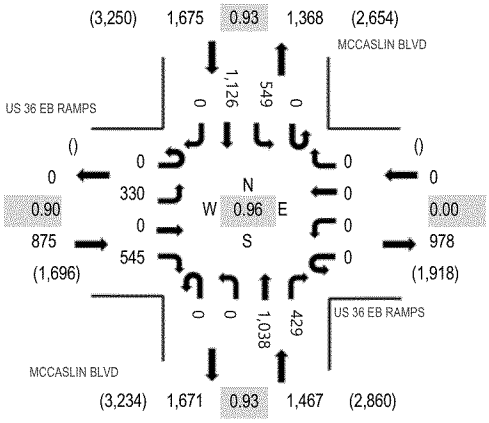
Traffic Counts - Motorized Vehicles

Interval Start Time	US 36 EB RAMPS Eastbound				US 36 EB RAMPS Westbound				MCCASLIN BLVD Northbound				MCCASLIN BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	47	0	26	0	0	0	0	0	0	124	35	0	52	140	0	424	2,196	0	0	0	0
7:15 AM	0	57	0	36	0	0	0	0	0	0	156	33	0	65	147	0	494	2,429	0	0	0	0
7:30 AM	0	71	0	36	0	0	0	0	0	0	248	43	0	54	116	0	568	2,681	0	0	0	0
7:45 AM	0	93	0	36	0	0	0	0	0	0	237	37	0	101	206	0	710	2,813	0	0	0	0
8:00 AM	0	79	0	52	0	0	0	0	0	0	210	49	0	83	184	0	657	2,796	0	0	0	0
8:15 AM	0	73	0	51	0	0	0	0	0	0	232	47	0	123	220	0	746		0	0	0	0
8:30 AM	0	72	0	62	0	0	0	0	0	0	255	55	0	89	167	0	700		0	0	0	0
8:45 AM	0	78	0	44	0	0	0	0	0	0	213	49	0	94	215	0	693		0	0	0	0
Count Total	0	570	0	343	0	0	0	0	0	0	1,675	348	0	661	1,395	0	4,992		0	0	0	0
Peak Hour	0	317	0	201	0	0	0	0	0	0	934	188	0	396	777	0	2,813		0	0	0	0

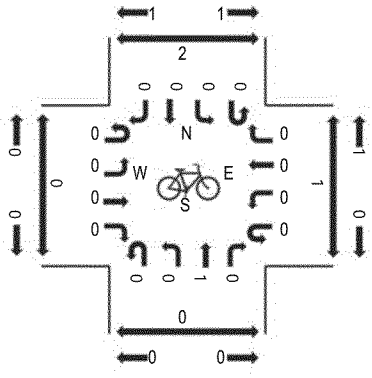
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 MCCASLIN BLVD & US 36 EB RAMPS PM
Date: Tuesday, October 17, 2023
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

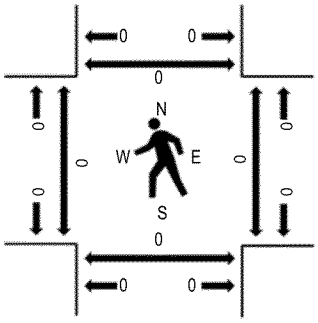
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

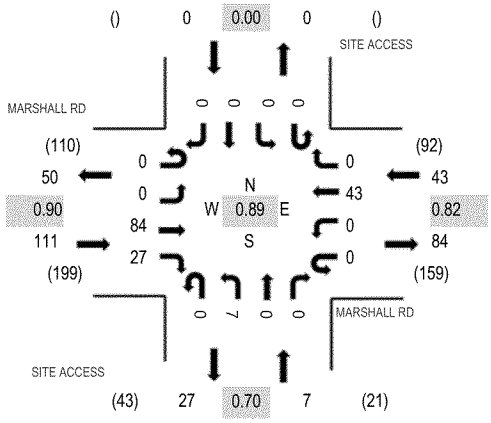
Traffic Counts - Motorized Vehicles

Interval Start Time	US 36 EB RAMPS Eastbound				US 36 EB RAMPS Westbound				MCCASLIN BLVD Northbound				MCCASLIN BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	68	0	147	0	0	0	0	0	0	268	112	0	131	236	0	962	3,921	0	0	0	0
4:15 PM	0	81	0	119	0	0	0	0	0	0	233	90	0	151	312	0	986	4,004	1	0	0	2
4:30 PM	0	66	0	126	0	0	0	0	0	0	270	113	0	139	246	0	960	3,977	1	0	0	2
4:45 PM	0	74	0	113	0	0	0	0	0	0	234	133	0	136	323	0	1,013	4,017	0	0	0	0
5:00 PM	0	75	0	156	0	0	0	0	0	0	281	113	0	160	260	0	1,045	3,885	0	0	0	0
5:15 PM	0	87	0	119	0	0	0	0	0	0	236	82	0	131	304	0	959		0	0	0	0
5:30 PM	0	94	0	157	0	0	0	0	0	0	287	101	0	122	239	0	1,000		0	0	0	0
5:45 PM	0	82	0	132	0	0	0	0	0	0	218	89	0	115	245	0	881		0	0	0	0
Count Total	0	627	0	1,069	0	0	0	0	0	0	2,027	833	0	1,085	2,165	0	7,806		2	0	0	4
Peak Hour	0	330	0	545	0	0	0	0	0	0	1,038	429	0	549	1,126	0	4,017		0	0	0	0

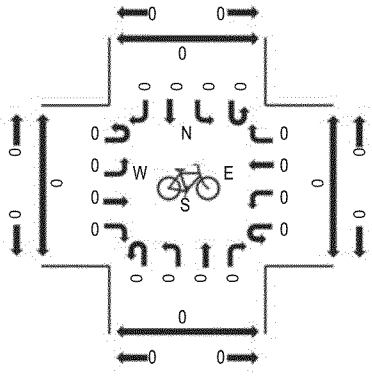
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 SITE ACCESS & MARSHALL RD AM
Date: Tuesday, October 17, 2023
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

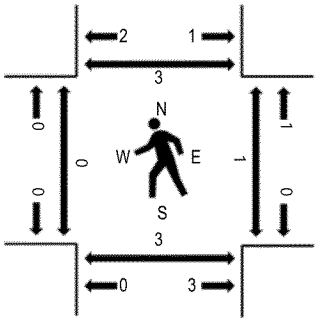
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

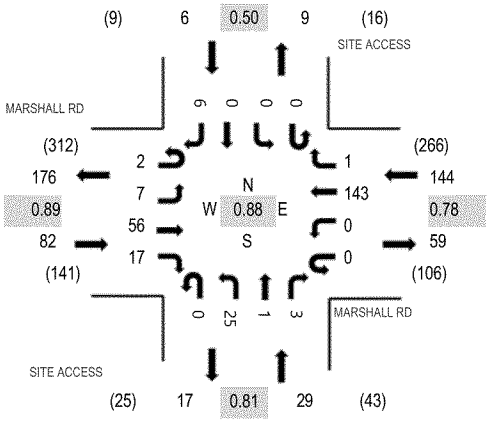
Traffic Counts - Motorized Vehicles

Interval Start Time	MARSHALL RD Eastbound				MARSHALL RD Westbound				SITE ACCESS Northbound				SITE ACCESS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	23	4	0	0	12	0	0	0	0	0	0	0	0	0	39	161	0	0	1	0
7:15 AM	0	0	23	8	0	0	13	0	0	1	0	0	0	0	0	0	45	161	0	0	0	1
7:30 AM	0	0	16	8	0	0	9	0	0	4	0	0	0	0	0	0	37	156	0	1	1	2
7:45 AM	0	0	22	7	0	0	9	0	0	2	0	0	0	0	0	0	40	151	0	0	1	0
8:00 AM	0	0	23	2	0	0	12	0	0	2	0	0	0	0	0	0	39	151	0	0	0	0
8:15 AM	0	0	18	5	0	0	15	0	0	2	0	0	0	0	0	0	40		0	0	0	0
8:30 AM	1	0	12	5	0	0	9	0	0	5	0	0	0	0	0	0	32		0	1	0	1
8:45 AM	0	0	20	2	0	2	11	0	0	3	0	2	0	0	0	0	40		0	0	0	0
Count Total	1	0	157	41	0	2	90	0	0	19	0	2	0	0	0	0	312		0	2	3	4
Peak Hour	0	0	84	27	0	0	43	0	0	7	0	0	0	0	0	0	161		0	1	3	3

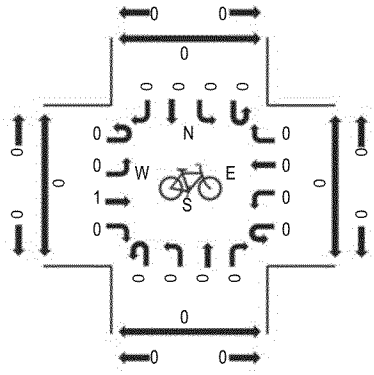
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 SITE ACCESS & MARSHALL RD PM
Date: Tuesday, October 17, 2023
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

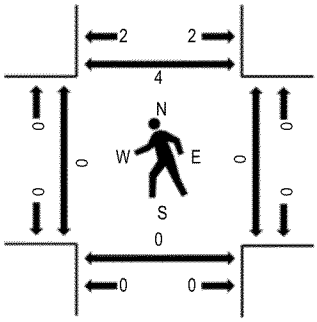
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

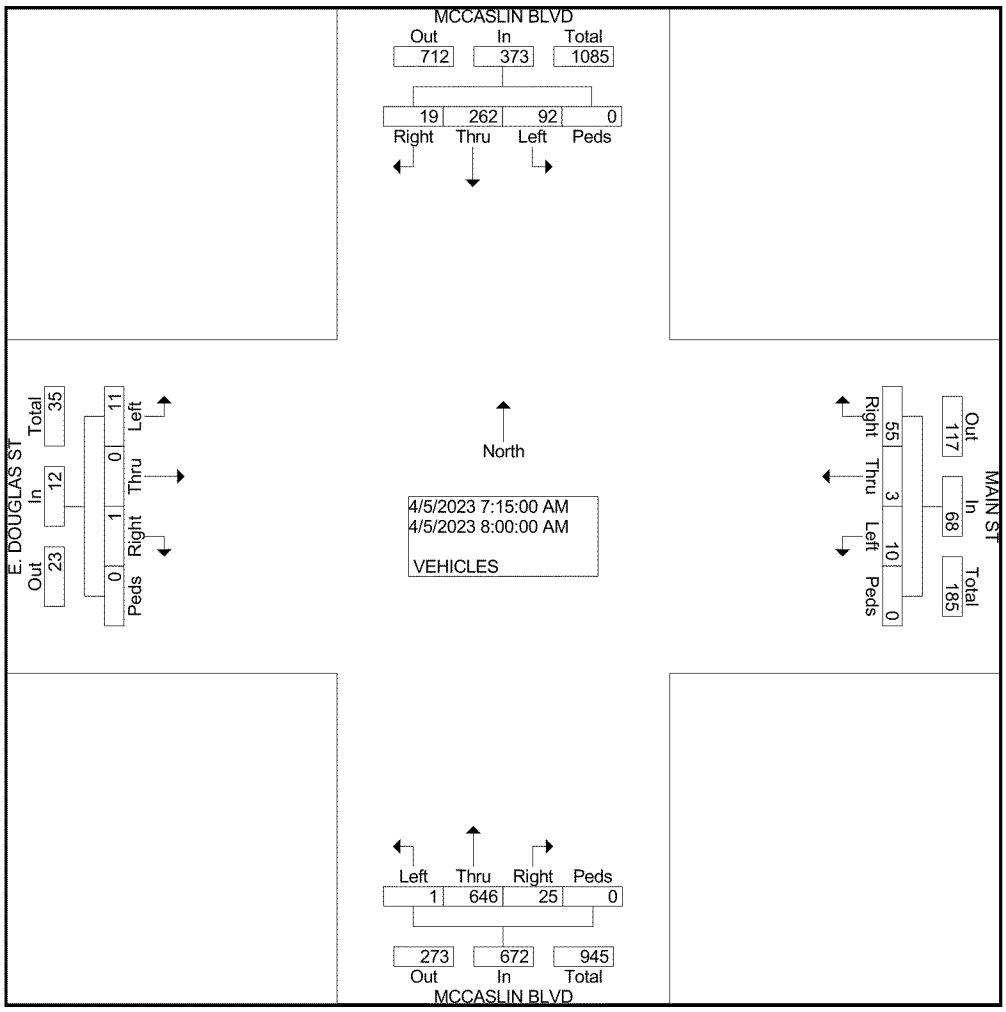
Interval Start Time	MARSHALL RD Eastbound				MARSHALL RD Westbound				SITE ACCESS Northbound				SITE ACCESS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	1	12	2	0	0	35	1	0	4	0	0	0	0	0	1	56	230	0	0	0	0
4:15 PM	0	3	7	4	0	0	33	0	0	4	0	1	0	0	0	0	52	239	0	0	0	0
4:30 PM	0	5	7	9	0	0	32	1	0	6	0	1	0	0	0	3	64	261	0	0	0	2
4:45 PM	1	1	17	4	0	0	27	0	0	6	0	0	0	0	0	2	58	242	0	0	0	2
5:00 PM	0	0	15	3	0	0	38	0	0	7	0	2	0	0	0	0	65	229	0	0	0	0
5:15 PM	1	1	17	1	0	0	46	0	0	6	1	0	0	0	0	1	74		0	0	0	0
5:30 PM	0	0	11	2	0	0	26	1	0	2	1	1	0	0	0	1	45		0	0	0	1
5:45 PM	2	0	15	0	0	0	26	0	0	1	0	0	0	0	0	1	45		0	0	0	2
Count Total	4	11	101	25	0	0	263	3	0	36	2	5	0	0	0	9	459		0	0	0	7
Peak Hour	2	7	56	17	0	0	143	1	0	25	1	3	0	0	0	6	261		0	0	0	4

COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: MCCASLIN BLVD
E/W STREET: MAIN ST
CITY: SUPERIOR
COUNTY: BOULDER

File Name : MCCASMAIN
Site Code : 00000005
Start Date : 4/5/2023

	MCCASLIN BLVD Southbound					MAIN ST Westbound					MCCASLIN BLVD Northbound					E. DOUGLAS ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:15 AM to 08:00 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	92	262	19	0	373	10	3	55	0	68	1	646	25	0	672	11	0	1	0	12	1125
Percent	24.7	70.2	5.1	0.0		14.7	4.4	80.9	0.0		0.1	96.1	3.7	0.0		91.7	0.0	8.3	0.0		
08:00 Volume	23	81	8	0	112	3	1	20	0	24	1	168	5	0	174	3	0	0	0	3	313
Peak Factor																					0.899
High Int.	08:00 AM					08:00 AM					07:45 AM					07:45 AM					
Volume	23	81	8	0	112	3	1	20	0	24	0	179	9	0	188	4	0	1	0	5	
Peak Factor					0.833					0.708					0.894					0.600	

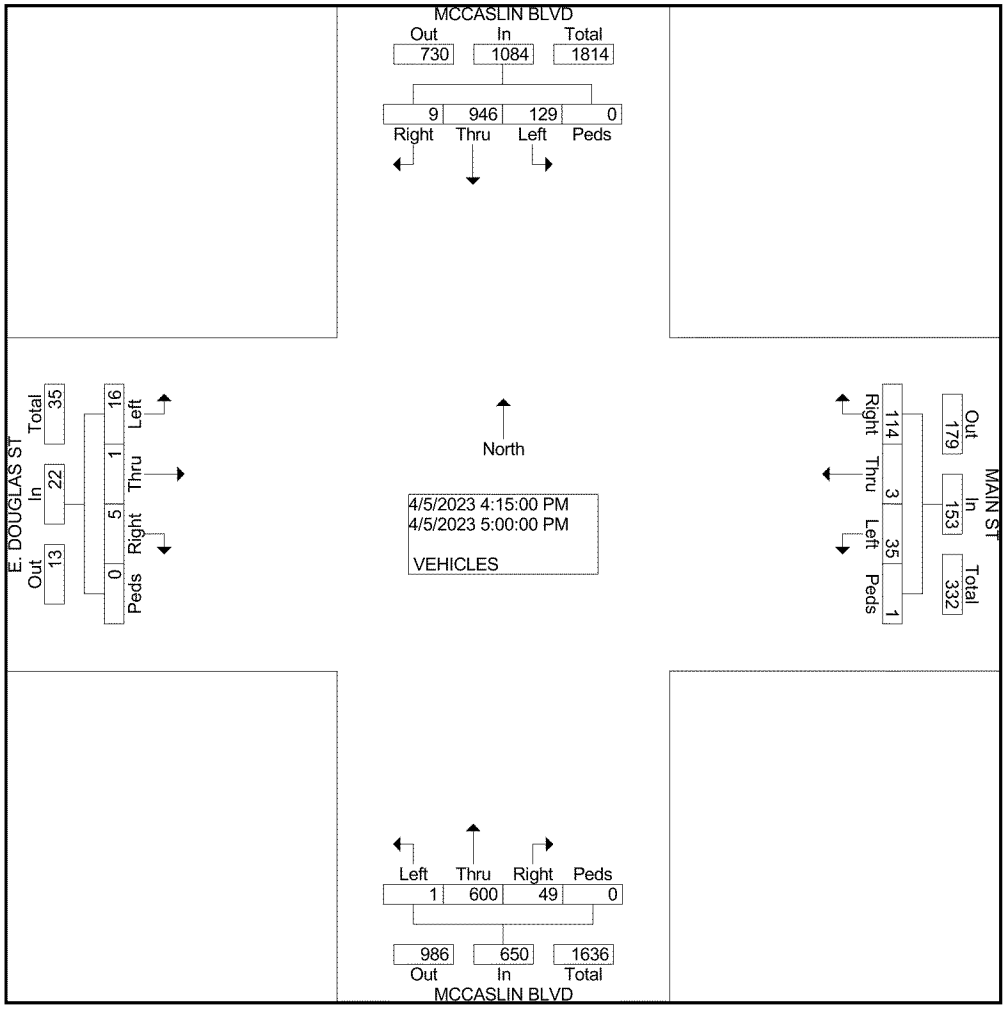


COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: MCCASLIN BLVD
E/W STREET: MAIN ST
CITY: SUPERIOR
COUNTY: BOULDER

File Name : MCCASMAIN
Site Code : 00000005
Start Date : 4/5/2023
Page No : 3

	MCCASLIN BLVD Southbound					MAIN ST Westbound					MCCASLIN BLVD Northbound					E. DOUGLAS ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:15 PM to 05:00 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	129	946	9	0	1084	35	3	114	1	153	1	600	49	0	650	16	1	5	0	22	1909
Percent	11.9	87.3	0.8	0.0		22.9	2.0	74.5	0.7		0.2	92.3	7.5	0.0		72.7	4.5	22.7	0.0		
05:00 Volume	32	241	4	0	277	14	2	41	0	57	0	157	8	0	165	9	0	2	0	11	510
Peak Factor																					0.936
High Int.	04:45 PM					05:00 PM					04:30 PM					05:00 PM					
Volume	48	230	1	0	279	14	2	41	0	57	0	158	7	0	165	9	0	2	0	11	
Peak Factor					0.971					0.671					0.985					0.500	

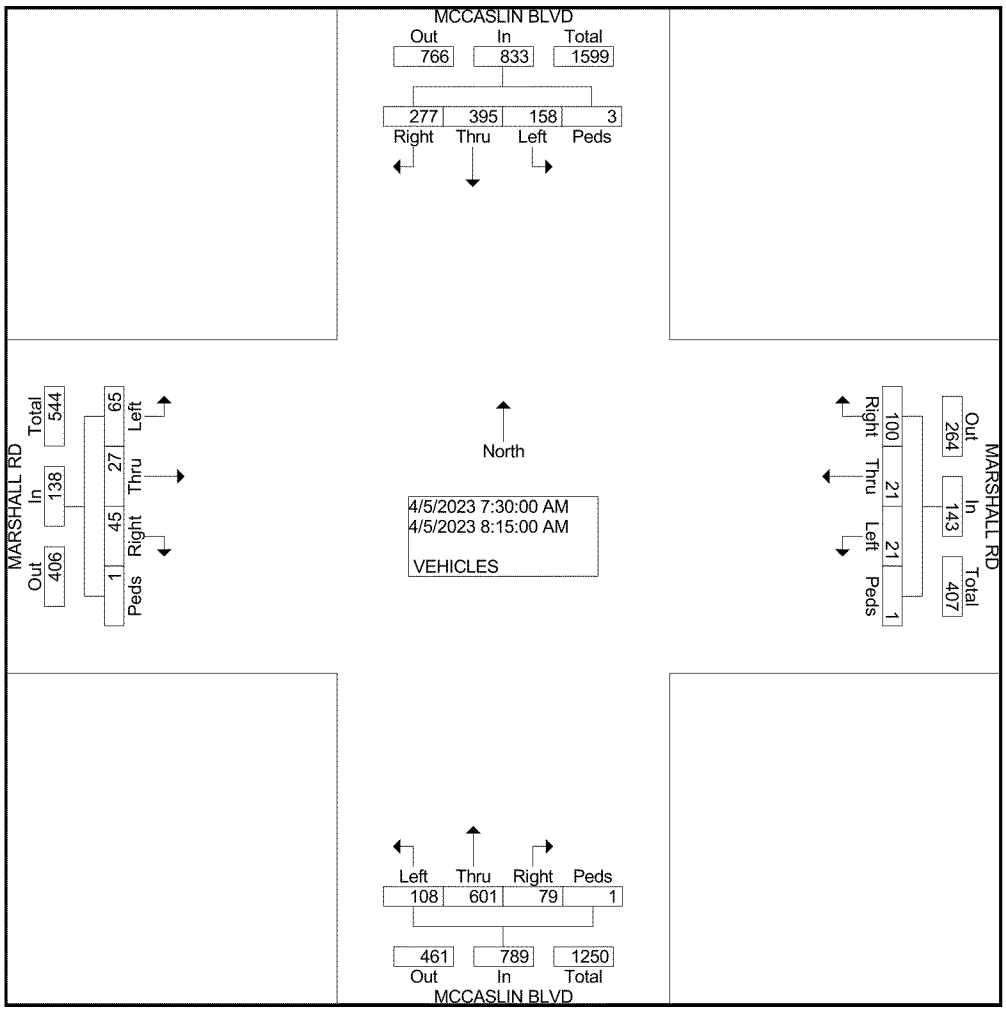


COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: MCCASLIN BLVD
E/W STREET: MARSHALL RD
CITY: SUPERIOR
COUNTY: BOULDER

File Name : MCCASMARSHALL
Site Code : 00000013
Start Date : 4/5/2023

	MCCASLIN BLVD Southbound					MARSHALL RD Westbound					MCCASLIN BLVD Northbound					MARSHALL RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	158	395	277	3	833	21	21	100	1	143	108	601	79	1	789	65	27	45	1	138	1903
Percent	19.0	47.4	33.3	0.4		14.7	14.7	69.9	0.7		13.7	76.2	10.0	0.1		47.1	19.6	32.6	0.7		
07:45 Volume	59	108	84	0	251	10	5	23	0	38	22	160	17	0	199	19	2	5	0	26	514
Peak Factor																					0.926
High Int.	07:45 AM					08:15 AM					08:15 AM					08:15 AM					
Volume	59	108	84	0	251	7	4	40	1	52	27	165	26	0	218	14	5	24	0	43	
Peak Factor					0.830					0.688					0.905					0.802	

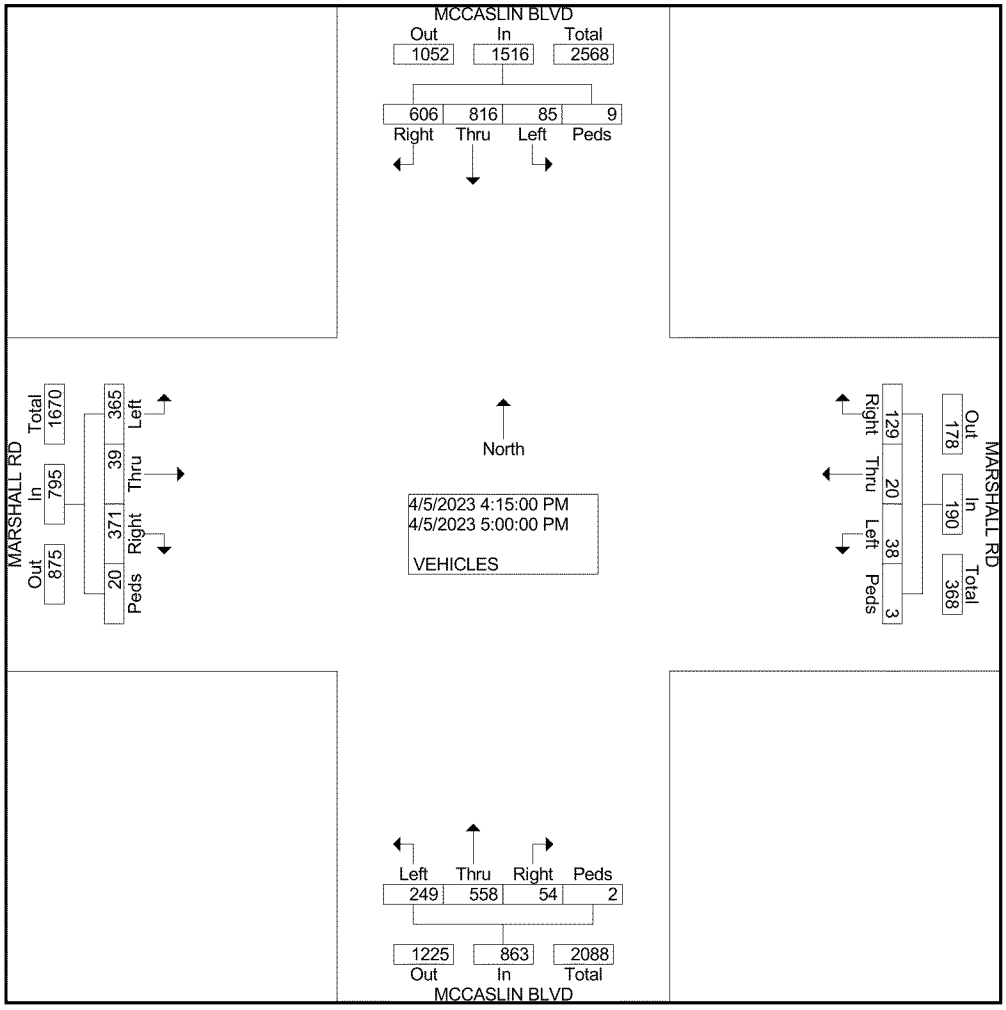


COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: MCCASLIN BLVD
E/W STREET: MARSHALL RD
CITY: SUPERIOR
COUNTY: BOULDER

File Name : MCCASMARSHALL
Site Code : 00000013
Start Date : 4/5/2023

	MCCASLIN BLVD Southbound					MARSHALL RD Westbound					MCCASLIN BLVD Northbound					MARSHALL RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	85	816	606	9	1516	38	20	129	3	190	249	558	54	2	863	365	39	371	20	795	3364
Percent	5.6	53.8	40.0	0.6		20.0	10.5	67.9	1.6		28.9	64.7	6.3	0.2		45.9	4.9	46.7	2.5		
04:30 Volume	27	202	170	0	399	7	4	28	0	39	68	164	15	0	247	135	10	107	10	262	947
Peak Factor																					0.888
High Int.	04:30 PM					05:00 PM					04:30 PM					04:30 PM					
Volume	27	202	170	0	399	9	4	46	0	59	68	164	15	0	247	135	10	107	10	262	
Peak Factor					0.950					0.805					0.873					0.759	



COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: MARSHALL RD E-O MCCASLIN BLVD
City: SUPERIOR
County: BOULDER
Direction: EAST/WEST

Site Code: 231819
Station ID: 231819

Start Time	18-Apr-23 Tue	EAST	WEST							Total
12:00 AM		*	*							*
01:00		*	*							*
02:00		*	*							*
03:00		*	*							*
04:00		*	*							*
05:00		*	*							*
06:00		*	*							*
07:00		*	*							*
08:00		*	*							*
09:00		**168**	**61**							**229**
10:00		111	42							153
11:00		87	31							118
12:00 PM		67	26							93
01:00		48	28							76
02:00		37	31							68
03:00		49	52							101
04:00		131	87							218
05:00		226	191							417
06:00		**238**	**217**							**455**
07:00		119	87							206
08:00		71	41							112
09:00		41	31							72
10:00		23	19							42
11:00		12	11							23
Total		1428	955							2383
Percent		59.9%	40.1%							
AM Peak	-	09:00	09:00	-	-	-	-	-	-	09:00
Vol.	-	168	61	-	-	-	-	-	-	229
PM Peak	-	18:00	18:00	-	-	-	-	-	-	18:00
Vol.	-	238	217	-	-	-	-	-	-	455

COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: MARSHALL RD E-O MCCASLIN BLVD
City: SUPERIOR
County: BOULDER
Direction: EAST/WEST

Site Code: 231819
Station ID: 231819

Start Time	19-Apr-23 Wed	EAST	WEST							Total
12:00 AM		11	6							17
01:00		6	4							10
02:00		4	3							7
03:00		9	5							14
04:00		22	13							35
05:00		31	21							52
06:00		59	36							95
07:00		81	59							140
08:00		**234**	**123**							**357**
09:00		157	67							224
10:00		*	*							*
11:00		*	*							*
12:00 PM		*	*							*
01:00		*	*							*
02:00		*	*							*
03:00		*	*							*
04:00		*	*							*
05:00		*	*							*
06:00		*	*							*
07:00		*	*							*
08:00		*	*							*
09:00		*	*							*
10:00		*	*							*
11:00		*	*							*
Total		614	337							951
Percent		64.6%	35.4%							
AM Peak	-	08:00	08:00	-	-	-	-	-	-	08:00
Vol.	-	234	123	-	-	-	-	-	-	357
PM Peak	-	-	-	-	-	-	-	-	-	-
Vol.	-	-	-	-	-	-	-	-	-	-
Grand Total		2042	1292							3334
Percent		61.2%	38.8%							
ADT		ADT 1,890		AADT 1,890						

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ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Configuration Controller Sequence

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B		B		B		B		B							
Sequence 1																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 2																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 3																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 4																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 5																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 6																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 7																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 8																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 9																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 10																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 11																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 12																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 13																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 14																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 15																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 16																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Hardware Alternate Sequence Enable: No

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ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Configuration Port 1 (SDLC)

Port 1 SDLC (MM) 1-4-1

BIU	1	2	3	4	5	6	7	8
Term & Facility								
Detector Rack								

Enable TS2/MMU Type Cabinet: No
Enable MMU Extended Status: No
Enable SDLC Stop Time: No
Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

Channel Can Serve With Channel	
Channel 1	**Channel 2**

Color Check Enable (MM) 1-4-3

Enable Color Check: Yes

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green																
Yellow																
Red																

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

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ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Configuration Communications 1 (SDLC)

Ethernet Port Configuration (MM) 1-5-1

DHCP Enable:	No
Controller IP:	172.16.8.112
Subnet Mask:	255.255.252.0
Default Gateway IP:	172.16.11.254
Server IP:	172.16.50.1

NTCIP (MM) 1-5-5

NTCIP Backup Time (Sec):	0
NTCIP UDP Port:	2101
Ethernet Priority:	1
Port 2 Priority (Port C50S for 2070):	4
Port 3A Priority (Port C21S for 2070):	3
Port 3B Priority (Port C22S for 2070):	2

Port Configuration (MM) 1-5-2 to 1-5-4

Port	2 (C50S)	3A (C21S)	3B (C22S)
Comm Module	None	Auto	Auto
Protocol	NTCIP	NTCIP	NTCIP
Enable	No	No	No
Data Rate (BPS)	9600	9600	9600
Data, Parity, Stop	8 N 1	8 N 1	8 N 1
Address	0	0	0
Telemetry Response Delay	0.0	0.0	0.0
Duplex - Half or Full	Half	Full	Full
Flow Control	No	Yes	Yes
Group Address	0	0	0
Single Flag Enable	Yes	Yes	Yes
RTS to CTS Delay	n/a	n/a	0.0
RTS Turn Off Delay	n/a	n/a	0.0
Dropout Time	10	10	10
Early RTS	n/a	n/a	No
Telemetry Mode	n/a	n/a	FSK
ATCS Railroad	0	n/a	n/a
ATCS Railroad Line	0	n/a	n/a
ATCS Group	0	n/a	n/a
Wayside Device	0	n/a	n/a
ATC Device	0	n/a	n/a
Wayside Subnode	0	n/a	n/a
ATC Subnode	0	n/a	n/a

ECPIP (MM) 1-5-6

Controller Address:	0
Expanded System Detector Address:	0

System Detector Assignment

System Detector	Local Detector

Wireless Configuration (MM) 1-5-7

Wireless Channel Number:	1
Wireless Access Code:	327423274

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ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Configuration Logging / Display

Event Logging (MM) 1-6-1

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	Yes	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Display Options (MM) 1-7-2

Key Click Enable:	No
Switch to Graphics Mode:	No
LED Mode:	Auto
Display Mode:	Basic
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: Solutions that Move the World
Sign On Message Line 2:

Software Modules (MM) 8-7

Application Version: 32.66.10
OS (Boot) Version: 06.07.00

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ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Logic Processor Page 1

Logic Statement Control (MM) 1-8-1

Logic #	Statement Control

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Logic Processor Page 2

Logic Statements (MM) 1-8-2

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Controller Timing Plan (MM) 2-1
Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	20	0	0	0	0	0	29	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	0	0	0	0	16	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	8.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	0	45	0	0	0	0	0	70	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	3.5	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	0.0	3.7	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	20	0	0	0	0	0	29	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	0	0	0	0	16	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	8.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	0	45	0	0	0	0	0	50	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	3.5	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	0.0	3.7	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Controller Overlaps

Vehicle Overlaps (MM) 2-2

Overlap	Type	Lag Green	Yellow	Red	Adv. Green

Phases

Overlap	Phase	Included	Protect	Ped Protect	Not Overlap	Modifier	Lag X Phases	Lag 2 Phases	Flash Green

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable

Guaranteed Minimum Time Data (MM) 2-4

Phase	Min Green	Walk	Ped Clear	Yellow	Red Clear	Overlap Green
A01	5	0	7	3.0	0.0	5
B02	5	0	7	3.0	0.0	5
C03	5	0	7	3.0	0.0	5
D04	5	0	7	3.0	0.0	5
E05	5	0	7	3.0	0.0	5
F06	5	0	7	3.0	0.0	5
G07	5	0	7	3.0	0.0	5
H08	5	0	7	3.0	0.0	5
I09	5	0	7	3.0	0.0	5
J10	5	0	7	3.0	0.0	5
K11	5	0	7	3.0	0.0	5
L12	5	0	7	3.0	0.0	5
M13	5	0	7	3.0	0.0	5
N14	5	0	7	3.0	0.0	5
O15	5	0	7	3.0	0.0	5
P16	5	0	7	3.0	0.0	5

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Controller Pedestrian Overlaps
Vehicle / Pedestrian Overlaps (MM) 2-3

Included	Pedestrian Overlaps

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Controller Start / Flash Data (MM) 2-5

Start Up

Phase	Phase Setting
1	.
2	R
3	.
4	.
5	.
6	.
7	.
8	.
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.

Overlap
A
B
C
D

Flash Thru Mon: No
Flash Time: 0
All Red: 6
Power Start Seq: 1
MUTCD Enabled: No
Y->G: n/a

Automatic Flash

Entry
2

Exit
2

Overlap Exit
A
B
C
D

Flash Thru Mon: No
Exit Flash: W
Minimum Flash: 8
Mimimum Recall: No
Cycle Through Phase: No

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Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I		X				X										
Non-Act II				X				X								
Dual Entry																
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk																
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off Unit Red Revert: 2.0 MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No Free Input Disables Pre-Timed: No

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pre-Timed																

Phase Recall Options (MM) 2-8

Plan # 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall		X						X								
Ped Recall		X						X								
Max Recall		X						X								
Soft Recall																
No Rest																
Al Calc																

Plan # 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Vehicle Recall																
Ped Recall		X						X								
Max Recall		X						X								
Soft Recall																
No Rest																
Al Calc																

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Coordination Options

Options (MM) 3-1

Manual Pattern	Auto	ECPI Coord	Yes
System Source	TBC	System Format	STD
Splits In	Seconds	Offsets In	Seconds
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Float
Offset Reference	Yellow	Use Ped Time	No
Ped Recall	No	Ped Reservice	No
Local Zero Override	No	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

Auto Perm Minimum Green (Seconds) (MM) 3-4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Demand 1																
Demand 2																

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

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003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	120	Std (COS)	9	Offsets In	Seconds
Offset Value	48s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	1		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 1)	0	50	0	0	0	0	0	70	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	50s	70s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	100	Std (COS)	17	Offsets In	Seconds
Offset Value	65s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	2		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	2		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 2)	0	45	0	0	0	0	0	55	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	45s	55s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	120	Std (COS)	25	Offsets In	Seconds
Offset Value	55s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	3		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 3)	0	52	0	0	0	0	0	68	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	52s	68s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 4

Split Pattern	4	TS2 (Pat-Off)	1-1	Splits In	Seconds
Cycle	80	Std (COS)	33	Offsets In	Seconds
Offset Value	0s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	4		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 4)	0	38	0	0	0	0	0	42	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	38s	42s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase								X								
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 5

Split Pattern	5	TS2 (Pat-Off)	1-2	Splits In	Seconds
Cycle	120	Std (COS)	41	Offsets In	Seconds
Offset Value	48s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	5		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 5)	0	58	0	0	0	0	0	62	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	58s	62s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

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Coordination Split Pattern
Split Pattern Data (MM) 3-3

Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	50	0	0	0	0	0	70	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	50s	70s	0s	0s

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	45	0	0	0	0	0	55	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	45s	55s	0s	0s

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	52	0	0	0	0	0	68	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	52s	68s	0s	0s

Split Pattern # 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	38	0	0	0	0	0	42	0	0	0	0	0	0	0	0
Coord Phase								X								
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	38s	42s	0s	0s

Split Pattern # 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	58	0	0	0	0	0	62	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	58s	62s	0s	0s

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Preempt Plan

Preempt Plan (MM) 4-1

No Enabled Preempts

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Preempt Preempt Filtering
Enable Preempt Filtering & TSP/SCP (MM) 4-2

Input	Solid	Pulsing
1	...BYPASSED...	...BYPASSED...
2	...BYPASSED...	...BYPASSED...
3	PREEMPTION 3	PREEMPTION 7
4	PREEMPTION 4	PREEMPTION 8
5	PREEMPTION 5	PREEMPTION 9
6	PREEMPTION 6	PREEMPTION 10
7	...BYPASSED...	...BYPASSED...
8	...BYPASSED...	...BYPASSED...
9	...BYPASSED...	...BYPASSED...
10	...BYPASSED...	...BYPASSED...

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003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Preempt TSP/SCP Plan and Split

TSP / SCP Plan (MM) 4-3

TSP/SCP Plan	Enable Option	Signal Type	Det Lock	Delay Time	Max Presence	PMT Enables Reservice	No Delay in TSP	Action SF Inhibit	Reservice Cycles	Bus Heading
1	No	Solid	No	0	0	No	False	0	0	NB
2	No	Solid	No	0	0	No	False	0	0	SB
3	No	Solid	No	0	0	No	False	0	0	EB
4	No	Solid	No	0	0	No	False	0	0	WB
5	No	Solid	No	0	0	No	False	0	0	.
6	No	Solid	No	0	0	No	False	0	0	.

Mode: TSP
Free Default Pattern: 120
Headway Allowance: 0

TSP/SCP Plan	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP / SCP Split Pattern (MM) 4-4

TSP/SCP Split Pattern	Max Type	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4	Max Reduction	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255

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Time Base Clock/Calendar
Clock/Calendar Data (MM) 5-1

Manual Action Plan:	0
SYNC Reference Time:	00:00
SYNC Reference:	Reference Time
Day Light Savings:	No
Time Reset Input Set Time:	3:30:00
Standard Time From GMT:	0

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Time Base Action Plan
Action Plan (MM) 5-2

Action Plan - 1 - "1"

Pattern	1	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 2 - "2"

Pattern	2	Override Sys	No
Timing Plan	2	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 3 - "3"

Pattern	3	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 4 - "4"

Pattern	4	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 5 - "5"

Pattern	5	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

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Time Base Day Plan/Schedule
Day Plan (MM) 5-3

Day Plan #1 - "1"

Event	Action Plan	Start Time
1	1	06:30
2	2	09:00
3	3	15:30
4	2	19:00

Day Plan #2 - "2"

Event	Action Plan	Start Time
1	2	06:30
2	5	10:00
3	2	18:00

Schedule (MM) 5-4

Schedule Number - 1

Day Plan No.: 1

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X	X	

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 2

Day Plan No.: 2

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						X

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Louisville/Superior

ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Time Base Exceptions
Exception Day Program (MM) 5-5

Excep Day	Float/Fixed	Mon/Mon	DOW/DOM	WOM/Year	Day Plan

Louisville/Superior

ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Detectors

Detectors - Pg 1

Veh Det Phase Assignment (MM) 6-1

Vehicle Detector Plan Number - 1

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 2

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 3

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 4

Veh Detector	Called Phase	Type

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	S-STANDARD	Yes	
2	S-STANDARD	Yes	
3	S-STANDARD	Yes	
4	S-STANDARD	Yes	
5	S-STANDARD	Yes	
6	S-STANDARD	Yes	
7	S-STANDARD	Yes	
8	S-STANDARD	Yes	
9	S-STANDARD	Yes	
10	S-STANDARD	Yes	
11	S-STANDARD	Yes	
12	S-STANDARD	Yes	
13	S-STANDARD	Yes	
14	S-STANDARD	Yes	
15	S-STANDARD	Yes	
16	S-STANDARD	Yes	
17	S-STANDARD	Yes	
18	S-STANDARD	Yes	
19	S-STANDARD	Yes	
20	S-STANDARD	Yes	
21	S-STANDARD	Yes	
22	S-STANDARD	Yes	
23	S-STANDARD	Yes	
24	S-STANDARD	Yes	
25	S-STANDARD	Yes	
26	S-STANDARD	Yes	
27	S-STANDARD	Yes	
28	S-STANDARD	Yes	
29	S-STANDARD	Yes	
30	S-STANDARD	Yes	
31	S-STANDARD	Yes	
32	S-STANDARD	Yes	
33	S-STANDARD	Yes	
34	S-STANDARD	Yes	
35	S-STANDARD	Yes	
36	S-STANDARD	Yes	
37	S-STANDARD	Yes	
38	S-STANDARD	Yes	
39	S-STANDARD	Yes	
40	S-STANDARD	Yes	
41	S-STANDARD	Yes	
42	S-STANDARD	Yes	
43	S-STANDARD	Yes	
44	S-STANDARD	Yes	
45	S-STANDARD	Yes	
46	S-STANDARD	Yes	
47	S-STANDARD	Yes	
48	S-STANDARD	Yes	
49	S-STANDARD	Yes	
50	S-STANDARD	Yes	
51	S-STANDARD	Yes	
52	S-STANDARD	Yes	
53	S-STANDARD	Yes	
54	S-STANDARD	Yes	
55	S-STANDARD	Yes	
56	S-STANDARD	Yes	
57	S-STANDARD	Yes	
58	S-STANDARD	Yes	
59	S-STANDARD	Yes	
60	S-STANDARD	Yes	
61	S-STANDARD	Yes	
62	S-STANDARD	Yes	

63	S-STANDARD	Yes	
64	S-STANDARD	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 3

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 4

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Ped Detector Phase Assignment (MM) 6-3

Mode: NTCIP

Called Phase	Detector
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16

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Detectors

Detectors - Pg 2

Log - Speed Detector Setup (MM) 6-4

NTCIP Log Period: 60 ECPI Log Period: 0 Length Unit: Inches

Speed Detector	Local Detector	One/Two Detector	Vehicle Length	Trap length	Enable Log
1	0	1	0	0	No
2	0	1	0	0	No
3	0	1	0	0	No
4	0	1	0	0	No
5	0	1	0	0	No
6	0	1	0	0	No
7	0	1	0	0	No
8	0	1	0	0	No
9	0	1	0	0	No
10	0	1	0	0	No
11	0	1	0	0	No
12	0	1	0	0	No
13	0	1	0	0	No
14	0	1	0	0	No
15	0	1	0	0	No
16	0	1	0	0	No

Vehicle Detector Diagnostics (MM) 6-5

Veh Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Pedestrian Detector Diagnostics (MM) 6-6

Ped Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier
2	0	0	2	1
4	0	0	2	1
6	0	0	2	1
8	0	0	2	1

Ped Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier

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Configuration **Controller Sequence**

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B		B		B		B		B							
Sequence 1																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Hardware Alternate Sequence Enable: No

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Configuration Port 1 (SDLC)

Port 1 SDLC (MM) 1-4-1

BIU	1	2	3	4	5	6	7	8
Term & Facility								
Detector Rack								

Enable TS2/MMU Type Cabinet: No
Enable MMU Extended Status: No
Enable SDLC Stop Time: No
Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

Channel Can Serve With Channel	
Channel 1	**Channel 2**

Color Check Enable (MM) 1-4-3

Enable Color Check: Yes

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green																
Yellow																
Red																

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

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Configuration Communications 1 (SDLC)

Ethernet Port Configuration (MM) 1-5-1

DHCP Enable:	No
Controller IP:	172.16.8.111
Subnet Mask:	255.255.252.0
Default Gateway IP:	172.16.11.254
Server IP:	172.16.50.1

NTCIP (MM) 1-5-5

NTCIP Backup Time (Sec):	0
NTCIP UDP Port:	2101
Ethernet Priority:	1
Port 2 Priority (Port C50S for 2070):	4
Port 3A Priority (Port C21S for 2070):	3
Port 3B Priority (Port C22S for 2070):	2

Port Configuration (MM) 1-5-2 to 1-5-4

Port	2 (C50S)	3A (C21S)	3B (C22S)
Comm Module	None	Auto	Auto
Protocol	NTCIP	NTCIP	NTCIP
Enable	Yes	No	No
Data Rate (BPS)	9600	9600	9600
Data, Parity, Stop	8 N 1	8 N 1	8 N 1
Address	1	0	0
Telemetry Response Delay	0.0	0.0	0.0
Duplex - Half or Full	Half	Full	Full
Flow Control	No	Yes	Yes
Group Address	0	0	0
Single Flag Enable	Yes	Yes	Yes
RTS to CTS Delay	n/a	n/a	0.0
RTS Turn Off Delay	n/a	n/a	0.0
Dropout Time	10	10	10
Early RTS	n/a	n/a	No
Telemetry Mode	n/a	n/a	FSK
ATCS Railroad	0	n/a	n/a
ATCS Railroad Line	0	n/a	n/a
ATCS Group	0	n/a	n/a
Wayside Device	0	n/a	n/a
ATC Device	0	n/a	n/a
Wayside Subnode	0	n/a	n/a
ATC Subnode	0	n/a	n/a

ECPIP (MM) 1-5-6

Controller Address:	0
Expanded System Detector Address:	0

System Detector Assignment

System Detector	Local Detector

Wireless Configuration (MM) 1-5-7

Wireless Channel Number:	1
Wireless Access Code:	327423274

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Configuration Logging / Display

Event Logging (MM) 1-6-1

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	Yes	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Display Options (MM) 1-7-2

Key Click Enable:	No
Switch to Graphics Mode:	Yes
LED Mode:	Auto
Display Mode:	Basic
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: Solutions that Move the World
Sign On Message Line 2:

Software Modules (MM) 8-7

Application Version: 32.66.10
OS (Boot) Version: 06.07.00

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Logic Processor Page 1

Logic Statement Control (MM) 1-8-1

Logic #	Statement Control

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Logic Processor Page 2

Logic Statements (MM) 1-8-2

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Controller Timing Plan (MM) 2-1
Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	32	0	26	0	0	0	0	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	17	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	8.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	0	65	0	55	0	0	0	0	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	3.5	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	0.0	5.8	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	0.0	5.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	8.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	27	0	21	0	0	0	0	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	17	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	8.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	3.5	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	0.0	5.8	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	0.0	5.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	8.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Controller Overlaps
Vehicle Overlaps (MM) 2-2

Overlap	Type	Lag Green	Yellow	Red	Adv. Green

Phases

Overlap	Phase	Included	Protect	Ped Protect	Not Overlap	Modifier	Lag X Phases	Lag 2 Phases	Flash Green

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable

Guaranteed Minimum Time Data (MM) 2-4

Phase	Min Green	Walk	Ped Clear	Yellow	Red Clear	Overlap Green
A01	5	0	7	3.0	0.0	5
B02	5	0	7	3.0	0.0	5
C03	5	0	7	3.0	0.0	5
D04	5	0	7	3.0	0.0	5
E05	5	0	7	3.0	0.0	5
F06	5	0	7	3.0	0.0	5
G07	5	0	7	3.0	0.0	5
H08	5	0	7	3.0	0.0	5
I09	5	0	7	3.0	0.0	5
J10	5	0	7	3.0	0.0	5
K11	5	0	7	3.0	0.0	5
L12	5	0	7	3.0	0.0	5
M13	5	0	7	3.0	0.0	5
N14	5	0	7	3.0	0.0	5
O15	5	0	7	3.0	0.0	5
P16	5	0	7	3.0	0.0	5

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Controller Pedestrian Overlaps
Vehicle / Pedestrian Overlaps (MM) 2-3

Included	Pedestrian Overlaps

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Controller Start / Flash Data (MM) 2-5

Start Up

Phase	Phase Setting
1	.
2	Y
3	.
4	.
5	.
6	.
7	.
8	.
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.

Overlap
A
B
C
D

Flash Thru Mon: No
Flash Time: 0
All Red: 6
Power Start Seq: 1
MUTCD Enabled: No
Y->G: n/a

Automatic Flash

Entry
2

Exit
2

Overlap Exit
A
B
C
D

Flash Thru Mon: No
Exit Flash: W
Minimum Flash: 8
Mimimum Recall: No
Cycle Through Phase: No

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Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I		X				X										
Non-Act II				X				X								
Dual Entry																
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk																
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off Unit Red Revert: 2.0 MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No Free Input Disables Pre-Timed: No

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pre-Timed																

Phase Recall Options (MM) 2-8

Plan # 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall		X		X												
Ped Recall																
Max Recall		X		X												
Soft Recall																
No Rest																
Al Calc																

Plan # 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall		X		X												
Ped Recall																
Max Recall		X		X												
Soft Recall																
No Rest																
Al Calc																

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Coordination Options

Options (MM) 3-1

Manual Pattern	Auto	ECPI Coord	Yes
System Source	TBC	System Format	STD
Splits In	Seconds	Offsets In	Seconds
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Float
Offset Reference	Yellow	Use Ped Time	No
Ped Recall	No	Ped Reservice	No
Local Zero Override	No	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

Auto Perm Minimum Green (Seconds) (MM) 3-4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Demand 1																
Demand 2																

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

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Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	120	Std (COS)	9	Offsets In	Seconds
Offset Value	46s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	1		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 1)	0	60	0	60	0	0	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	0s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	100	Std (COS)	17	Offsets In	Seconds
Offset Value	58s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	2		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	2		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 2)	0	55	0	45	0	0	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	0s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	120	Std (COS)	25	Offsets In	Seconds
Offset Value	43s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	3		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 3)	0	60	0	60	0	0	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	0s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 4

Split Pattern	4	TS2 (Pat-Off)	1-1	Splits In	Seconds
Cycle	80	Std (COS)	33	Offsets In	Seconds
Offset Value	0s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	4		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 4)	0	42	0	38	0	0	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	80s	0s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase				X												
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 5

Split Pattern	5	TS2 (Pat-Off)	1-2	Splits In	Seconds
Cycle	120	Std (COS)	41	Offsets In	Seconds
Offset Value	46s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	5		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 5)	0	62	0	58	0	0	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	0s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

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Coordination Split Pattern
Split Pattern Data (MM) 3-3

Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	60	0	60	0	0	0	0	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	0s	0s	0s

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	55	0	45	0	0	0	0	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	0s	0s	0s

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	60	0	60	0	0	0	0	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	0s	0s	0s

Split Pattern # 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	42	0	38	0	0	0	0	0	0	0	0	0	0	0	0
Coord Phase				X												
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	80s	0s	0s	0s

Split Pattern # 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	62	0	58	0	0	0	0	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	0s	0s	0s

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002 - McCaslin Blvd @ US-36 @ S Ramp - Cobalt @ 172.16.8.111 - Econolite Type - Cobalt

Preempt Plan

Preempt Plan (MM) 4-1

Preempt Plan 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh																
Trk Clr Overlap																
Enable Trailing																
Dwell Veh		X														
Dwell Ped																
Dwell Overlap																
Cycling Veh																
Cycling Ped																
Cycling Overlap																
Exit Phases		X														
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.5	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing																
Dwell Veh	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases				X												
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	10	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.5	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing																
Dwell Veh	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases		X														
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	0	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	10	4.0	1.0
	Min Grn	**Ext Grn**	**Max Grn**	**Yellow**	**Red**
Track Clear	0	0	0	4.0	1.0
	Min Dwell	**Pmt Ext**	**Max Time**	**Yellow**	**Red**
Dwell / Cycle-Exit	0	0.0	120	3.5	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh																
Trk Clr Overlap																
Enable Trailing																
Dwell Veh				X												
Dwell Ped																
Dwell Overlap																
Cycling Veh																
Cycling Ped																
Cycling Overlap																
Exit Phases				X												
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	10	4.0	1.0
	Min Grn	**Ext Grn**	**Max Grn**	**Yellow**	**Red**
Track Clear	0	0	0	4.0	1.0
	Min Dwell	**Pmt Ext**	**Max Time**	**Yellow**	**Red**
Dwell / Cycle-Exit	0	0.0	120	3.5	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 6

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing																
Dwell Veh	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases		X														
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	10	4.0	1.0
	Min Grn	**Ext Grn**	**Max Grn**	**Yellow**	**Red**
Track Clear	0	0	0	4.0	1.0
	Min Dwell	**Pmt Ext**	**Max Time**	**Yellow**	**Red**
Dwell / Cycle-Exit	0	0.0	120	3.5	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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002 - McCaslin Blvd @ US-36 @ S Ramp - Cobalt @ 172.16.8.111 - Econolite Type - Cobalt

Preempt Preempt Filtering
Enable Preempt Filtering & TSP/SCP (MM) 4-2

Input	Solid	Pulsing
1	...BYPASSED...	...BYPASSED...
2	...BYPASSED...	...BYPASSED...
3	PREEMPTION 3	PREEMPTION 7
4	PREEMPTION 4	PREEMPTION 8
5	PREEMPTION 5	PREEMPTION 9
6	PREEMPTION 6	PREEMPTION 10
7	...BYPASSED...	...BYPASSED...
8	...BYPASSED...	...BYPASSED...
9	...BYPASSED...	...BYPASSED...
10	...BYPASSED...	...BYPASSED...

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002 - McCaslin Blvd @ US-36 @ S Ramp - Cobalt @ 172.16.8.111 - Econolite Type - Cobalt

Preempt TSP/SCP Plan and Split

TSP / SCP Plan (MM) 4-3

TSP/SCP Plan	Enable Option	Signal Type	Det Lock	Delay Time	Max Presence	PMT Enables Reservice	No Delay in TSP	Action SF Inhibit	Reservice Cycles	Bus Heading
1	No	Solid	No	0	0	No	False	0	0	NB
2	No	Solid	No	0	0	No	False	0	0	SB
3	No	Solid	No	0	0	No	False	0	0	EB
4	No	Solid	No	0	0	No	False	0	0	WB
5	No	Solid	No	0	0	No	False	0	0	.
6	No	Solid	No	0	0	No	False	0	0	.

Mode: TSP
Free Default Pattern: 120
Headway Allowance: 0

TSP/SCP Plan	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP / SCP Split Pattern (MM) 4-4

TSP/SCP Split Pattern	Max Type	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4	Max Reduction	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255

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Time Base Clock/Calendar
Clock/Calendar Data (MM) 5-1

Manual Action Plan:	0
SYNC Reference Time:	00:00
SYNC Reference:	Reference Time
Day Light Savings:	No
Time Reset Input Set Time:	3:30:00
Standard Time From GMT:	0

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Time Base Action Plan
Action Plan (MM) 5-2

Action Plan - 1 - "1"

Pattern	1	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 2 - "2"

Pattern	2	Override Sys	No
Timing Plan	2	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 3 - "3"

Pattern	3	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 4 - "4"

Pattern	4	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 5 - "5"

Pattern	5	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

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Time Base Day Plan/Schedule
Day Plan (MM) 5-3

Day Plan #1 - "1"

Event	Action Plan	Start Time
1	1	06:30
2	2	09:00
3	3	15:30
4	2	19:00

Day Plan #2 - "2"

Event	Action Plan	Start Time
1	2	06:30
2	5	10:00
3	2	18:00

Schedule (MM) 5-4

Schedule Number - 1

Day Plan No.: 1

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X	X	

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 2

Day Plan No.: 2

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						X

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Louisville/Superior

ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

002 - McCaslin Blvd @ US-36 @ S Ramp - Cobalt @ 172.16.8.111 - Econolite Type - Cobalt

Time Base Exceptions
Exception Day Program (MM) 5-5

Excep Day	Float/Fixed	Mon/Mon	DOW/DOM	WOM/Year	Day Plan

Louisville/Superior

ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

002 - McCaslin Blvd @ US-36 @ S Ramp - Cobalt @ 172.16.8.111 - Econolite Type - Cobalt

Detectors

Detectors - Pg 1

Veh Det Phase Assignment (MM) 6-1

Vehicle Detector Plan Number - 1

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 2

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 3

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 4

Veh Detector	Called Phase	Type

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	S-STANDARD	Yes	
2	S-STANDARD	Yes	
3	S-STANDARD	Yes	
4	S-STANDARD	Yes	
5	S-STANDARD	Yes	
6	S-STANDARD	Yes	
7	S-STANDARD	Yes	
8	S-STANDARD	Yes	
9	S-STANDARD	Yes	
10	S-STANDARD	Yes	
11	S-STANDARD	Yes	
12	S-STANDARD	Yes	
13	S-STANDARD	Yes	
14	S-STANDARD	Yes	
15	S-STANDARD	Yes	
16	S-STANDARD	Yes	
17	S-STANDARD	Yes	
18	S-STANDARD	Yes	
19	S-STANDARD	Yes	
20	S-STANDARD	Yes	
21	S-STANDARD	Yes	
22	S-STANDARD	Yes	
23	S-STANDARD	Yes	
24	S-STANDARD	Yes	
25	S-STANDARD	Yes	
26	S-STANDARD	Yes	
27	S-STANDARD	Yes	
28	S-STANDARD	Yes	
29	S-STANDARD	Yes	
30	S-STANDARD	Yes	
31	S-STANDARD	Yes	
32	S-STANDARD	Yes	
33	S-STANDARD	Yes	
34	S-STANDARD	Yes	
35	S-STANDARD	Yes	
36	S-STANDARD	Yes	
37	S-STANDARD	Yes	
38	S-STANDARD	Yes	
39	S-STANDARD	Yes	
40	S-STANDARD	Yes	
41	S-STANDARD	Yes	
42	S-STANDARD	Yes	
43	S-STANDARD	Yes	
44	S-STANDARD	Yes	
45	S-STANDARD	Yes	
46	S-STANDARD	Yes	
47	S-STANDARD	Yes	
48	S-STANDARD	Yes	
49	S-STANDARD	Yes	
50	S-STANDARD	Yes	
51	S-STANDARD	Yes	
52	S-STANDARD	Yes	
53	S-STANDARD	Yes	
54	S-STANDARD	Yes	
55	S-STANDARD	Yes	
56	S-STANDARD	Yes	
57	S-STANDARD	Yes	
58	S-STANDARD	Yes	
59	S-STANDARD	Yes	
60	S-STANDARD	Yes	
61	S-STANDARD	Yes	
62	S-STANDARD	Yes	

63	S-STANDARD	Yes	
64	S-STANDARD	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 3

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 4

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Ped Detector Phase Assignment (MM) 6-3

Mode: NTCIP

Called Phase	Detector
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16

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Solutions that Move the World™

002 - McCaslin Blvd @ US-36 @ S Ramp - Cobalt @ 172.16.8.111 - Econolite Type - Cobalt

Detectors

Detectors - Pg 2

Log - Speed Detector Setup (MM) 6-4

NTCIP Log Period: 60 ECPI Log Period: 0 Length Unit: Inches

Speed Detector	Local Detector	One/Two Detector	Vehicle Length	Trap length	Enable Log
1	0	1	0	0	No
2	0	1	0	0	No
3	0	1	0	0	No
4	0	1	0	0	No
5	0	1	0	0	No
6	0	1	0	0	No
7	0	1	0	0	No
8	0	1	0	0	No
9	0	1	0	0	No
10	0	1	0	0	No
11	0	1	0	0	No
12	0	1	0	0	No
13	0	1	0	0	No
14	0	1	0	0	No
15	0	1	0	0	No
16	0	1	0	0	No

Vehicle Detector Diagnostics (MM) 6-5

Veh Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Pedestrian Detector Diagnostics (MM) 6-6

Ped Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier
2	0	0	2	1
4	0	0	2	1
6	0	0	2	1
8	0	0	2	1

Ped Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier

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Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Configuration Controller Sequence

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B		B		B		B		B							
Sequence 1																
Ring 1	2	1	8	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	3	7	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 2																
Ring 1	1	2	8	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	3	7	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 3																
Ring 1	1	2	4	8	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	3	7	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 4																
Ring 1	2	1	8	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	3	7	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 5																
Ring 1	2	1	8	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	3	7	11	12	15	16	.	.	.	.	.	.	.	.

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Hardware Alternate Sequence Enable: No

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Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Configuration **Port 1 (SDLC)**

Port 1 SDLC (MM) 1-4-1

BIU	1	2	3	4	5	6	7	8
Term & Facility								
Detector Rack			X					

Enable TS2/MMU Type Cabinet: No
Enable MMU Extended Status: No
Enable SDLC Stop Time: No
Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

Channel Can Serve With Channel	
Channel 1	**Channel 2**

Color Check Enable (MM) 1-4-3
Enable Color Check: Yes

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green																
Yellow																
Red																

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

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Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Configuration Communications 1 (SDLC)

Ethernet Port Configuration (MM) 1-5-1

DHCP Enable:	No
Controller IP:	172.16.8.110
Subnet Mask:	255.255.252.0
Default Gateway IP:	172.16.11.254
Server IP:	172.16.50.1

NTCIP (MM) 1-5-5

NTCIP Backup Time (Sec):	0
NTCIP UDP Port:	2101
Ethernet Priority:	1
Port 2 Priority (Port C50S for 2070):	4
Port 3A Priority (Port C21S for 2070):	3
Port 3B Priority (Port C22S for 2070):	2

Port Configuration (MM) 1-5-2 to 1-5-4

Port	2 (C50S)	3A (C21S)	3B (C22S)
Comm Module	None	Auto	Auto
Protocol	NTCIP	NTCIP	NTCIP
Enable	No	No	No
Data Rate (BPS)	9600	9600	9600
Data, Parity, Stop	8 N 1	8 N 1	8 N 1
Address	1	0	0
Telemetry Response Delay	0.0	0.0	0.0
Duplex - Half or Full	Half	Full	Full
Flow Control	No	Yes	Yes
Group Address	0	0	0
Single Flag Enable	Yes	Yes	Yes
RTS to CTS Delay	n/a	n/a	0.0
RTS Turn Off Delay	n/a	n/a	0.0
Dropout Time	10	10	10
Early RTS	n/a	n/a	No
Telemetry Mode	n/a	n/a	FSK
ATCS Railroad	0	n/a	n/a
ATCS Railroad Line	0	n/a	n/a
ATCS Group	0	n/a	n/a
Wayside Device	0	n/a	n/a
ATC Device	0	n/a	n/a
Wayside Subnode	0	n/a	n/a
ATC Subnode	0	n/a	n/a

ECPIP (MM) 1-5-6

Controller Address:	1
Expanded System Detector Address:	0

System Detector Assignment

System Detector	Local Detector

Wireless Configuration (MM) 1-5-7

Wireless Channel Number:	1
Wireless Access Code:	327423274

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Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Configuration Logging / Display

Event Logging (MM) 1-6-1

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	Yes	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Display Options (MM) 1-7-2

Key Click Enable:	Yes
Switch to Graphics Mode:	No
LED Mode:	Auto
Display Mode:	Advanced
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: Solutions that Move the World
Sign On Message Line 2:

Software Modules (MM) 8-7

Application Version: 32.65.30
OS (Boot) Version: 06.07.00

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001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Logic Processor Page 1

Logic Statement Control (MM) 1-8-1

Logic #	Statement Control

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001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Logic Processor Page 2

Logic Statements (MM) 1-8-2

Logic #: 1 - ""

If:

	Peer	T/F	Assignment	#		State
IF	--	F	PED ON PH PED CLR	8	IS	On

Then:

Assignment	#	State
LP SET LOGIC FLAG	1	On

Logic #: 2 - ""

If:

	Peer	T/F	Assignment	#		State
IF	--	F	LP LOGIC FLAG	1	IS	On

Then:

Assignment	#	State
CRD SET FREE		On

Logic #: 3 - ""

If:

	Peer	T/F	Assignment	#		State
IF	--	F	VEH GREEN ON PH	2	IS	On
OR	--	F	VEH GREEN ON PH	6	IS	On

Then:

Assignment	#	State
LP SET LOGIC FLAG	1	Off

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Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1
Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	3	10	0	5	3	10	0	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	4	0	4	0	4	0	4	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	18	0	27	0	18	0	27	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.0	3.0	0.0	3.0	2.0	3.0	0.0	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	75	75	0	19	75	75	0	11	35	35	35	35	35	35	35	35
Max2	75	75	0	22	75	75	0	11	40	40	40	40	40	40	40	40
Max3	75	75	0	29	75	75	0	14	0	0	0	0	0	0	0	0
DYM Max	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	2.0	0.0	2.0	1.0	2.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Controller Overlaps
Vehicle Overlaps (MM) 2-2

Overlap	Type	Lag Green	Yellow	Red	Adv. Green

Phases

Overlap	Phase	Included	Protect	Ped Protect	Not Overlap	Modifier	Lag X Phases	Lag 2 Phases	Flash Green

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable
A	1	2	Yellow Ped	9	0.0	0.0	1	No
C	5	6	Yellow Ped	11	0.0	0.0	5	No

Guaranteed Minimum Time Data (MM) 2-4

Phase	Min Green	Walk	Ped Clear	Yellow	Red Clear	Overlap Green
A01	5	0	7	3.0	0.0	5
B02	5	0	7	3.0	0.0	5
C03	5	0	7	3.0	0.0	5
D04	5	0	7	3.0	0.0	5
E05	5	0	7	3.0	0.0	5
F06	5	0	7	3.0	0.0	5
G07	5	0	7	3.0	0.0	5
H08	5	0	7	3.0	0.0	5
I09	5	0	7	3.0	0.0	5
J10	5	0	7	3.0	0.0	5
K11	5	0	7	3.0	0.0	5
L12	5	0	7	3.0	0.0	5
M13	5	0	7	3.0	0.0	5
N14	5	0	7	3.0	0.0	5
O15	5	0	7	3.0	0.0	5
P16	5	0	7	3.0	0.0	5

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Controller Pedestrian Overlaps
Vehicle / Pedestrian Overlaps (MM) 2-3

Included	Pedestrian Overlaps

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Controller Start / Flash Data (MM) 2-5

Start Up

Phase	Phase Setting
1	.
2	Y
3	.
4	.
5	.
6	Y
7	.
8	.
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.

Overlap
A
B
C
D

Flash Thru Mon: No
Flash Time: 0
All Red: 6
Power Start Seq: 1
MUTCD Enabled: No
Y->G: n/a

Automatic Flash

Entry
2
6

Exit
2
6

Overlap Exit
A
B
C
D

Flash Thru Mon: No
Exit Flash: W
Minimum Flash: 8
Mimimum Recall: No
Cycle Through Phase: No

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Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I		X				X										
Non-Act II																
Dual Entry		X				X										
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk		X				X										
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off

Unit Red Revert: 2.0

MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No

Free Input Disables Pre-Timed: No

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pre-Timed																

Phase Recall Options (MM) 2-8

Plan # 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall																
Ped Recall		X				X										
Max Recall	X	X				X										
Soft Recall																
No Rest																
AI Calc																

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Coordination Options

Options (MM) 3-1

Manual Pattern	Auto	ECPI Coord	Yes
System Source	TBC	System Format	STD
Splits In	Seconds	Offsets In	Seconds
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Float
Offset Reference	Yellow	Use Ped Time	No
Ped Recall	No	Ped Reservice	No
Local Zero Override	No	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

Auto Perm Minimum Green (Seconds) (MM) 3-4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Demand 1																
Demand 2																

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

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Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	120	Std (COS)	9	Offsets In	Seconds
Offset Value	64s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	4		
Phase Reservice	No	Action Plan	1		
Max Select	MAX 1	Force Off	Float		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 1)	15	48	0	27	20	43	0	30	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	63s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	100	Std (COS)	10	Offsets In	Seconds
Offset Value	74s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	4		
Phase Reservice	No	Action Plan	2		
Max Select	MAX 2	Force Off	Float		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 2)	15	37	0	30	15	37	0	18	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	52s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	120	Std (COS)	11	Offsets In	Seconds
Offset Value	70s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	4		
Phase Reservice	No	Action Plan	3		
Max Select	MAX 3	Force Off	Float		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 3)	15	49	0	28	15	49	0	28	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	64s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 4

Split Pattern	4	TS2 (Pat-Off)	1-1	Splits In	Seconds
Cycle	100	Std (COS)	12	Offsets In	Seconds
Offset Value	24s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	2		
Phase Reservice	No	Action Plan	4		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 4)	10	34	0	37	10	34	0	19	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	44s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 5

Split Pattern	5	TS2 (Pat-Off)	1-2	Splits In	Seconds
Cycle	100	Std (COS)	13	Offsets In	Seconds
Offset Value	15s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	5		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 5)	15	45	0	25	15	45	0	15	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	60s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 6

Split Pattern	6	TS2 (Pat-Off)	1-3	Splits In	Seconds
Cycle	80	Std (COS)	14	Offsets In	Seconds
Offset Value	24s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	3		
Phase Reservice	No	Action Plan	5		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 6)	0	34	0	30	0	34	0	16	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	80s	34s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 7

Split Pattern	7	TS2 (Pat-Off)	2-1	Splits In	Seconds
Cycle	120	Std (COS)	0	Offsets In	Seconds
Offset Value	24s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	4		
Phase Reservice	No	Action Plan	7		
Max Select	MAX 3	Force Off	Float		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 7)	18	31	0	40	18	31	0	31	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	49s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

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Coordination Split Pattern
Split Pattern Data (MM) 3-3

Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	15	48	0	27	20	43	0	30	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	63s	0s	0s

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	15	37	0	30	15	37	0	18	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	52s	0s	0s

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	15	49	0	28	15	49	0	28	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	64s	0s	0s

Split Pattern # 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	10	34	0	37	10	34	0	19	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	44s	0s	0s

Split Pattern # 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	15	45	0	25	15	45	0	15	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	60s	0s	0s

Split Pattern # 6

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	34	0	30	0	34	0	16	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																

Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	80s	34s	0s	0s

Split Pattern # 7

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	18	31	0	40	18	31	0	31	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	49s	0s	0s

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Preempt Plan

Preempt Plan (MM) 4-1

No Enabled Preempts

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Preempt Preempt Filtering
Enable Preempt Filtering & TSP/SCP (MM) 4-2

Input	Solid	Pulsing
1	...BYPASSED...	...BYPASSED...
2	...BYPASSED...	...BYPASSED...
3	PREEMPTION 3	PREEMPTION 7
4	PREEMPTION 4	PREEMPTION 8
5	PREEMPTION 5	PREEMPTION 9
6	PREEMPTION 6	PREEMPTION 10
7	...BYPASSED...	...BYPASSED...
8	...BYPASSED...	...BYPASSED...
9	...BYPASSED...	...BYPASSED...
10	...BYPASSED...	...BYPASSED...

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001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Preempt TSP/SCP Plan and Split

TSP / SCP Plan (MM) 4-3

TSP/SCP Plan	Enable Option	Signal Type	Det Lock	Delay Time	Max Presence	PMT Enables Reservice	No Delay in TSP	Action SF Inhibit	Reservice Cycles	Bus Heading
1	No	Solid	No	0	0	No	False	0	0	NB
2	No	Solid	No	0	0	No	False	0	0	SB
3	No	Solid	No	0	0	No	False	0	0	EB
4	No	Solid	No	0	0	No	False	0	0	WB
5	No	Solid	No	0	0	No	False	0	0	.
6	No	Solid	No	0	0	No	False	0	0	.

Mode: TSP
Free Default Pattern: 120
Headway Allowance: 100

TSP/SCP Plan	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP / SCP Split Pattern (MM) 4-4

TSP/SCP Split Pattern	Max Type	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4	Max Reduction	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255

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Time Base Clock/Calendar
Clock/Calendar Data (MM) 5-1

Manual Action Plan:	0
SYNC Reference Time:	00:00
SYNC Reference:	Reference Time
Day Light Savings:	No
Time Reset Input Set Time:	3:30:00
Standard Time From GMT:	0

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Time Base Action Plan
Action Plan (MM) 5-2

Action Plan - 1 - "1"

Pattern	1	Override Sys	Yes
Timing Plan	1	Sequence	4
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)	X				X											
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	E	E	E	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 2 - "2"

Pattern	2	Override Sys	Yes
Timing Plan	1	Sequence	4
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)	X				X			

Aux Func (1-3)			

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	E	E	E	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 3 - "3"

Pattern	3	Override Sys	Yes
Timing Plan	1	Sequence	4
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)	X				X			

Aux Func (1-3)			

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	E	E	E	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 4 - "4"

Pattern	4	Override Sys	Yes
Timing Plan	1	Sequence	2
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 5 - "5"

Pattern	5	Override Sys	Yes
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 6 - "6"

Pattern	6	Override Sys	Yes
Timing Plan	1	Sequence	3
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit	X				X											

Spec Func (1-8)								
Aux Func (1-3)								

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 7 - "7"

Pattern	7	Override Sys	Yes
Timing Plan	1	Sequence	4
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)	X				X											
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	E	E	E	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

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Time Base Day Plan/Schedule
Day Plan (MM) 5-3

Day Plan #1 - "1"

Event	Action Plan	Start Time
1	1	06:30
2	2	09:00
3	3	15:30
4	2	19:00
5	6	22:00

Day Plan #2 - "2"

Event	Action Plan	Start Time
1	2	06:30
2	7	10:00
3	2	18:00
4	6	22:00

Schedule (MM) 5-4

Schedule Number - 1

Day Plan No.: 1

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X	X	

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 2

Day Plan No.: 2

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						X

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Louisville/Superior

ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Time Base Exceptions
Exception Day Program (MM) 5-5

Excep Day	Float/Fixed	Mon/Mon	DOW/DOM	WOM/Year	Day Plan
1	FIXED	11	22	2018	2
2	FIXED	11	23	2018	2
3	FIXED	12	21	2018	2
4	FIXED	12	24	2018	2
5	FIXED	12	28	2018	2
6	FIXED	12	31	2018	2

Louisville/Superior

ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Detectors

Detectors - Pg 1

Veh Det Phase Assignment (MM) 6-1

Vehicle Detector Plan Number - 1

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 2

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 3

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 4

Veh Detector	Called Phase	Type

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	S-STANDARD	Yes	
2	S-STANDARD	Yes	
3	S-STANDARD	Yes	
4	S-STANDARD	Yes	
5	S-STANDARD	Yes	
6	S-STANDARD	Yes	
7	S-STANDARD	Yes	
8	S-STANDARD	Yes	
9	S-STANDARD	Yes	
10	S-STANDARD	Yes	
11	S-STANDARD	Yes	
12	S-STANDARD	Yes	
13	S-STANDARD	Yes	
14	S-STANDARD	Yes	
15	S-STANDARD	Yes	
16	S-STANDARD	Yes	
17	S-STANDARD	Yes	
18	S-STANDARD	Yes	
19	S-STANDARD	Yes	
20	S-STANDARD	Yes	
21	S-STANDARD	Yes	
22	S-STANDARD	Yes	
23	S-STANDARD	Yes	
24	S-STANDARD	Yes	
25	S-STANDARD	Yes	
26	S-STANDARD	Yes	
27	S-STANDARD	Yes	
28	S-STANDARD	Yes	
29	S-STANDARD	Yes	
30	S-STANDARD	Yes	
31	S-STANDARD	Yes	
32	S-STANDARD	Yes	
33	S-STANDARD	Yes	
34	S-STANDARD	Yes	
35	S-STANDARD	Yes	
36	S-STANDARD	Yes	
37	S-STANDARD	Yes	
38	S-STANDARD	Yes	
39	S-STANDARD	Yes	
40	S-STANDARD	Yes	
41	S-STANDARD	Yes	
42	S-STANDARD	Yes	
43	S-STANDARD	Yes	
44	S-STANDARD	Yes	
45	S-STANDARD	Yes	
46	S-STANDARD	Yes	
47	S-STANDARD	Yes	
48	S-STANDARD	Yes	
49	S-STANDARD	Yes	
50	S-STANDARD	Yes	
51	S-STANDARD	Yes	
52	S-STANDARD	Yes	
53	S-STANDARD	Yes	
54	S-STANDARD	Yes	
55	S-STANDARD	Yes	
56	S-STANDARD	Yes	
57	S-STANDARD	Yes	
58	S-STANDARD	Yes	
59	S-STANDARD	Yes	
60	S-STANDARD	Yes	
61	S-STANDARD	Yes	
62	S-STANDARD	Yes	

63	S-STANDARD	Yes	
64	S-STANDARD	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 3

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 4

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Ped Detector Phase Assignment (MM) 6-3

Mode: NTCIP

Called Phase	Detector
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16

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ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Detectors

Detectors - Pg 2

Log - Speed Detector Setup (MM) 6-4

NTCIP Log Period: 60 ECPI Log Period: 0 Length Unit: Inches

Speed Detector	Local Detector	One/Two Detector	Vehicle Length	Trap length	Enable Log
1	0	1	0	0	No
2	0	1	0	0	No
3	0	1	0	0	No
4	0	1	0	0	No
5	0	1	0	0	No
6	0	1	0	0	No
7	0	1	0	0	No
8	0	1	0	0	No
9	0	1	0	0	No
10	0	1	0	0	No
11	0	1	0	0	No
12	0	1	0	0	No
13	0	1	0	0	No
14	0	1	0	0	No
15	0	1	0	0	No
16	0	1	0	0	No

Vehicle Detector Diagnostics (MM) 6-5

Veh Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Pedestrian Detector Diagnostics (MM) 6-6

Ped Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier
4	0	0	15	1
8	0	0	15	1

Ped Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier

APPENDIX B

Level of Service Definitions

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 6th Edition, Transportation Research Board, 2016: Chapter 19 – Signalized Intersections.

Motorized Vehicle Level of Service (LOS) for Signalized Intersections

Levels of service are defined to represent reasonable ranges in control delay.

LOS A Describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B Describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio[a]	
	$v/c \leq 1.0$	$v/c > 1.0$
≤ 10	A	F
> 10 – 20	B	F
> 20 – 35	C	F
> 35 – 55	D	F
> 55 – 80	E	F
> 80	F	F

Note: [a] For approach-based and intersectionwide assessments, LOS is defined solely by control delay.

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 6th Edition, Transportation Research Board, 2016: Chapter 20 – Two-Way Stop-Controlled Intersections, Chapter 21 – All-Way Stop-Controlled Intersections, and Chapter 22 - Roundabouts.

Motorized Vehicle Level of Service (LOS) for Unsignalized & Roundabout Intersections

LOS is a quantitative stratification of performance measure(s) representing quality of service. Quality of service describes how well a transportation facility or service operates from a traveler's perspective. LOS is measured on an A – F scale, with LOS A representing the best operating conditions from a traveler's perspective.

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio[a]	
	$v/c \leq 1.0$	$v/c > 1.0$
0 – 10	A	F
> 10 – 15	B	F
> 15 – 25	C	F
> 25 – 35	D	F
> 35 – 50	E	F
> 50	F	F

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

[a] For approaches and intersectionwide assessment, LOS is defined solely by control delay.

APPENDIX C

Capacity Worksheets



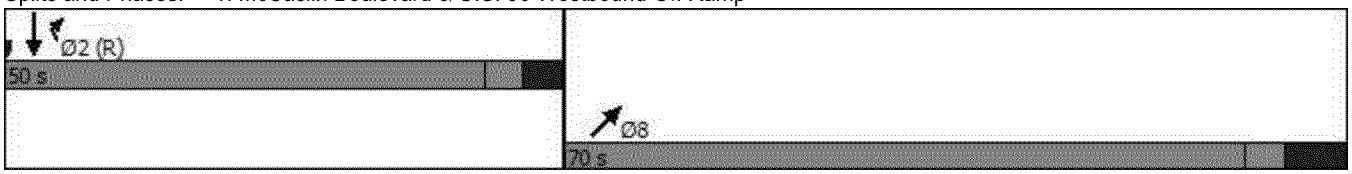
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	876	598	837
Future Volume (vph)	876	598	837
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		229	
Lane Group Flow (vph)	952	650	910
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	74.1	74.1	29.4
Actuated g/C Ratio	0.62	0.62	0.24
v/c Ratio	0.30	0.28	0.73
Control Delay	11.6	7.3	66.6
Queue Delay	0.0	0.0	0.0
Total Delay	11.6	7.3	66.6
LOS	B	A	E
Approach Delay	11.6		66.6
Approach LOS	B		E
Queue Length 50th (ft)	119	58	225
Queue Length 95th (ft)	167	96	216
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	3139	2316	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.30	0.28	0.35

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 30.4	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	4.2

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	876	296	0
Future Vol, veh/h	0	0	0	876	296	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	952	322	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	381	-
Stage 1	-	-	0	-
Stage 2	-	-	381	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	624	0
Stage 1	0	-	-	0
Stage 2	0	-	605	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	624	-
Mov Cap-2 Maneuver	-	-	624	-
Stage 1	-	-	-	-
Stage 2	-	-	605	-

Approach	SB	SW
HCM Control Delay, s	0	16.7
HCM LOS		C

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	624
HCM Lane V/C Ratio	-	0.516
HCM Control Delay (s)	-	16.7
HCM Lane LOS	-	C
HCM 95th %tile Q(veh)	-	3



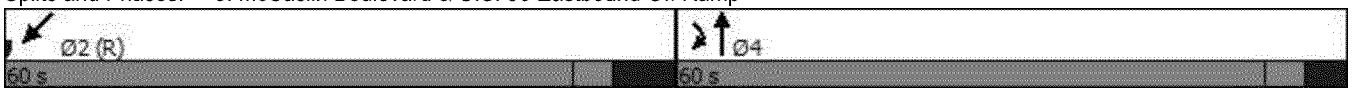
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	934	201	777
Future Volume (vph)	934	201	777
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		173	
Lane Group Flow (vph)	1015	218	845
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	32.9	32.9	70.3
Actuated g/C Ratio	0.27	0.27	0.59
v/c Ratio	0.73	0.20	0.28
Control Delay	42.4	8.1	6.3
Queue Delay	0.0	0.0	0.0
Total Delay	42.4	8.1	6.3
LOS	D	A	A
Approach Delay	42.4		6.3
Approach LOS	D		A
Queue Length 50th (ft)	263	11	42
Queue Length 95th (ft)	286	33	56
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1676	2978
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.46	0.13	0.28

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	4.7

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	934	0	0	317	0
Future Vol, veh/h	0	934	0	0	317	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1015	0	0	345	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	406	-
Stage 1	-	-	0	-
Stage 2	-	-	406	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	607	0
Stage 1	0	-	-	0
Stage 2	0	-	587	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	607	-
Mov Cap-2 Maneuver	-	-	607	-
Stage 1	-	-	-	-
Stage 2	-	-	587	-

Approach	NB	NE
HCM Control Delay, s	0	18.4
HCM LOS		C

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	607	-
HCM Lane V/C Ratio	0.568	-
HCM Control Delay (s)	18.4	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	3.6	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	27	45	21	21	100	108	601	79	158	395	277
Future Volume (vph)	65	27	45	21	21	100	108	601	79	158	395	277
Satd. Flow (prot)	3221	1678	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.990		0.950			0.493			0.380		
Satd. Flow (perm)	3221	1678	1583	1770	1863	1583	1782	5085	1583	708	5085	1583
Satd. Flow (RTOR)			145			136			127			301
Lane Group Flow (vph)	64	36	49	23	23	109	117	653	86	172	429	301
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	8.1	8.1	8.1	7.1	7.1	7.1	87.5	79.1	79.1	91.8	81.2	120.0
Actuated g/C Ratio	0.07	0.07	0.07	0.06	0.06	0.06	0.73	0.66	0.66	0.76	0.68	1.00
v/c Ratio	0.29	0.32	0.20	0.22	0.21	0.49	0.08	0.19	0.08	0.28	0.12	0.19
Control Delay	55.9	59.9	1.9	58.1	57.5	12.4	4.1	9.1	0.7	5.1	7.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	59.9	1.9	58.1	57.5	12.4	4.1	9.1	0.7	5.1	7.7	0.3
LOS	E	E	A	E	E	B	A	A	A	A	A	A
Approach Delay		39.1			25.9			7.6			4.7	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	26	29	0	17	17	0	9	69	0	29	41	0
Queue Length 95th (ft)	50	67	0	44	44	35	20	106	8	58	64	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	363	456	324	341	401	1516	3351	1086	694	3441	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.10	0.11	0.07	0.07	0.27	0.08	0.19	0.08	0.25	0.12	0.19

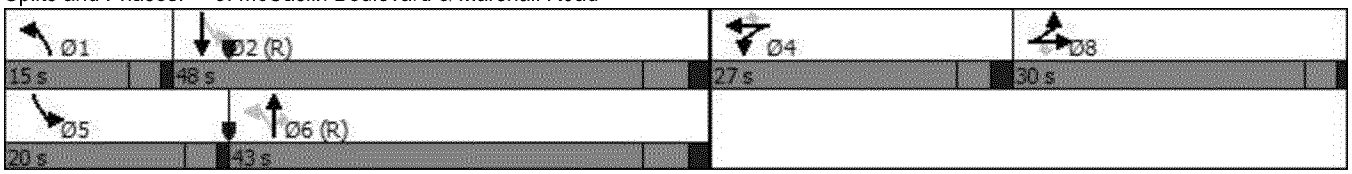
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 10.0	Intersection LOS: A
Intersection Capacity Utilization 40.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	4.8
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	13	74	730	406
Demand Flow Rate, veh/h	13	75	745	414
Vehicles Circulating, veh/h	404	729	114	15
Vehicles Exiting, veh/h	25	130	303	728
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.7	0.9	5.7	3.9
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.471	0.529
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	61	4.645	4.328	4.645	4.328
Entry Flow, veh/h	13	14	1938	350	395	195	219
Cap Entry Lane, veh/h	1007	764	0.980	1215	1289	1331	1402
Entry HV Adj Factor	1.000	0.996	60	0.980	0.979	0.979	0.983
Flow Entry, veh/h	13	14	1900	343	387	191	215
Cap Entry, veh/h	1007	761	0.032	1191	1262	1304	1379
V/C Ratio	0.013	0.018	0.0	0.288	0.306	0.146	0.156
Control Delay, s/veh	3.7	4.9	A	5.7	5.6	4.0	3.9
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		1	1	1	1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	84	27	0	43	0	7	0	0	0	0	0
Future Vol, veh/h	0	84	27	0	43	0	7	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	91	29	0	47	0	8	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	47	0	0	120	0	0	153	153	60	93	167	47
Stage 1	-	-	-	-	-	-	106	106	-	47	47	-
Stage 2	-	-	-	-	-	-	47	47	-	46	120	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1560	-	-	1467	-	-	807	738	993	886	725	1022
Stage 1	-	-	-	-	-	-	889	807	-	966	855	-
Stage 2	-	-	-	-	-	-	966	855	-	962	796	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1560	-	-	1467	-	-	807	738	993	886	725	1022
Mov Cap-2 Maneuver	-	-	-	-	-	-	807	738	-	886	725	-
Stage 1	-	-	-	-	-	-	889	807	-	966	855	-
Stage 2	-	-	-	-	-	-	966	855	-	962	796	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	9.5	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	807	1560	-	-	1467	-	-	-
HCM Lane V/C Ratio	0.009	-	-	-	-	-	-	-
HCM Control Delay (s)	9.5	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	43	0	0	84
Future Vol, veh/h	0	0	43	0	0	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	91

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	138	47	0	0	47	0
Stage 1	47	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	855	1022	-	-	1560	-
Stage 1	975	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	855	1022	-	-	1560	-
Mov Cap-2 Maneuver	855	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	933	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1560	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



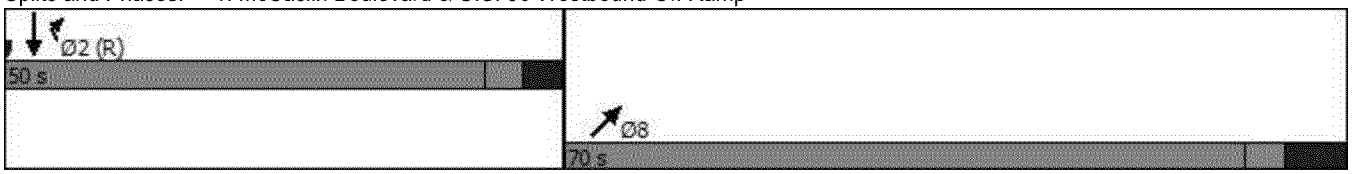
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	1390	446	999
Future Volume (vph)	1390	446	999
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		141	
Lane Group Flow (vph)	1511	485	1086
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	69.1	69.1	34.4
Actuated g/C Ratio	0.58	0.58	0.29
v/c Ratio	0.52	0.23	0.75
Control Delay	16.8	9.5	53.3
Queue Delay	0.0	0.0	0.0
Total Delay	16.8	9.5	53.3
LOS	B	A	D
Approach Delay	16.8		53.3
Approach LOS	B		D
Queue Length 50th (ft)	243	51	228
Queue Length 95th (ft)	330	87	207
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2928	2139	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.52	0.23	0.42

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 28.5	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	6.3

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	1390	339	0
Future Vol, veh/h	0	0	0	1390	339	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1511	368	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	604	-
Stage 1	-	-	0	-
Stage 2	-	-	604	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	487	0
Stage 1	0	-	-	0
Stage 2	0	-	463	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	487	-
Mov Cap-2 Maneuver	-	-	487	-
Stage 1	-	-	-	-
Stage 2	-	-	463	-

Approach	SB	SW
HCM Control Delay, s	0	31.9
HCM LOS		D

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	487
HCM Lane V/C Ratio	-	0.757
HCM Control Delay (s)	-	31.9
HCM Lane LOS	-	D
HCM 95th %tile Q(veh)	-	6.5



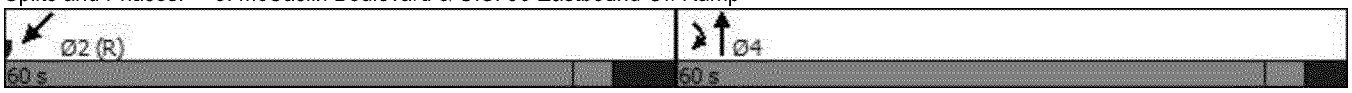
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1038	545	1126
Future Volume (vph)	1038	545	1126
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1128	592	1224
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	38.5	38.5	64.7
Actuated g/C Ratio	0.32	0.32	0.54
v/c Ratio	0.69	0.49	0.45
Control Delay	37.5	30.3	7.2
Queue Delay	0.0	0.0	0.0
Total Delay	37.5	30.3	7.2
LOS	D	C	A
Approach Delay	37.5		7.2
Approach LOS	D		A
Queue Length 50th (ft)	279	146	60
Queue Length 95th (ft)	293	170	75
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1611	2741
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.51	0.37	0.45

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	5

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1038	0	0	330	0
Future Vol, veh/h	0	1038	0	0	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1128	0	0	359	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	451	-
Stage 1	-	-	0	-
Stage 2	-	-	451	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	578	0
Stage 1	0	-	-	0
Stage 2	0	-	556	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	578	-
Mov Cap-2 Maneuver	-	-	578	-
Stage 1	-	-	-	-
Stage 2	-	-	556	-

Approach	NB	NE
HCM Control Delay, s	0	20.9
HCM LOS		C

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	578	-
HCM Lane V/C Ratio	0.621	-
HCM Control Delay (s)	20.9	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	4.2	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	365	39	371	38	20	129	249	558	154	85	816	606
Future Volume (vph)	365	39	371	38	20	129	249	558	154	85	816	606
Satd. Flow (prot)	3221	1636	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.965		0.950			0.275			0.409		
Satd. Flow (perm)	3221	1636	1583	1770	1863	1583	994	5085	1583	762	5085	1583
Satd. Flow (RTOR)			403			140			167			474
Lane Group Flow (vph)	290	149	403	41	22	140	271	607	167	92	887	659
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	17.9	17.9	17.9	8.5	8.5	8.5	77.8	66.8	66.8	75.5	65.6	120.0
Actuated g/C Ratio	0.15	0.15	0.15	0.07	0.07	0.07	0.65	0.56	0.56	0.63	0.55	1.00
v/c Ratio	0.61	0.61	0.70	0.33	0.17	0.58	0.33	0.21	0.17	0.17	0.32	0.42
Control Delay	52.5	57.9	11.1	59.2	54.0	18.4	9.1	14.9	3.2	9.2	16.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	57.9	11.1	59.2	54.0	18.4	9.1	14.9	3.2	9.2	16.6	0.8
LOS	D	E	B	E	D	B	A	B	A	A	B	A
Approach Delay		33.6			30.5			11.5			9.8	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	117	120	0	31	16	0	34	80	0	22	128	0
Queue Length 95th (ft)	154	184	89	66	42	61	67	134	39	54	205	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	354	658	324	341	404	887	2831	955	646	2781	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.42	0.61	0.13	0.06	0.35	0.31	0.21	0.17	0.14	0.32	0.42

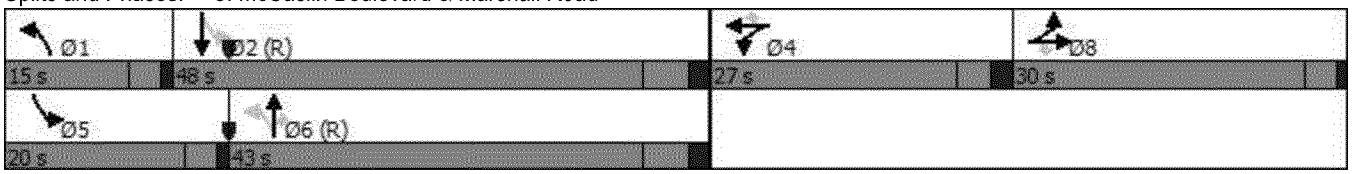
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	6.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	23	165	706	1178
Demand Flow Rate, veh/h	23	168	720	1202
Vehicles Circulating, veh/h	1231	683	161	43
Vehicles Exiting, veh/h	14	198	1093	682
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.8	1.3	5.9	7.3
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.469	0.531	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	126	4.645	4.328	4.645	4.328
Entry Flow, veh/h	23	42	1938	338	382	565	637
Cap Entry Lane, veh/h	499	795	0.980	1164	1238	1297	1369
Entry HV Adj Factor	0.999	0.975	124	0.982	0.979	0.980	0.980
Flow Entry, veh/h	23	41	1900	332	374	554	625
Cap Entry, veh/h	498	775	0.065	1143	1213	1272	1342
V/C Ratio	0.046	0.053	0.0	0.290	0.308	0.435	0.465
Control Delay, s/veh	7.8	5.2	A	5.9	5.8	7.2	7.3
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		1	1	2	3

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	56	17	0	143	1	25	1	3	0	0	6
Future Vol, veh/h	9	56	17	0	143	1	25	1	3	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	61	18	0	155	1	27	1	3	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	156	0	0	79	0	0	249	246	40	207	255	156
Stage 1	-	-	-	-	-	-	90	90	-	156	156	-
Stage 2	-	-	-	-	-	-	159	156	-	51	99	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1423	-	-	1518	-	-	694	656	1023	741	648	889
Stage 1	-	-	-	-	-	-	908	820	-	846	768	-
Stage 2	-	-	-	-	-	-	843	768	-	956	813	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1423	-	-	1518	-	-	685	651	1023	734	643	889
Mov Cap-2 Maneuver	-	-	-	-	-	-	685	651	-	734	643	-
Stage 1	-	-	-	-	-	-	902	814	-	840	768	-
Stage 2	-	-	-	-	-	-	837	768	-	945	807	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	10.3	9.1
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	708	1423	-	-	1518	-	-	889
HCM Lane V/C Ratio	0.045	0.007	-	-	-	-	-	0.007
HCM Control Delay (s)	10.3	7.5	0	-	0	-	-	9.1
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	144	0	0	59
Future Vol, veh/h	0	0	144	0	0	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	157	0	0	64

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	221	157	0	0	157	0
Stage 1	157	-	-	-	-	-
Stage 2	64	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	767	889	-	-	1423	-
Stage 1	871	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	767	889	-	-	1423	-
Mov Cap-2 Maneuver	767	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	959	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1423	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

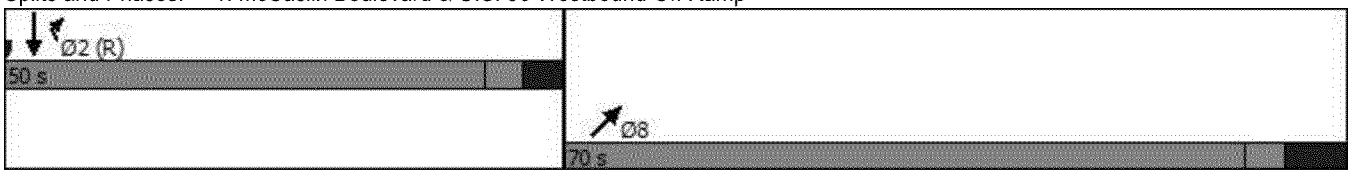
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	911	622	870
Future Volume (vph)	911	622	870
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		208	
Lane Group Flow (vph)	990	676	946
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	73.1	73.1	30.4
Actuated g/C Ratio	0.61	0.61	0.25
v/c Ratio	0.32	0.30	0.74
Control Delay	12.2	8.3	64.8
Queue Delay	0.0	0.0	0.0
Total Delay	12.2	8.3	64.8
LOS	B	A	E
Approach Delay	12.2		64.8
Approach LOS	B		E
Queue Length 50th (ft)	128	67	229
Queue Length 95th (ft)	178	109	221
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	3099	2281	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.32	0.30	0.37

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 30.2	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	6.4

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	911	378	0
Future Vol, veh/h	0	0	0	911	378	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	990	411	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	396	-
Stage 1	-	-	0	-
Stage 2	-	-	396	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	614	0
Stage 1	0	-	-	0
Stage 2	0	-	594	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	614	-
Mov Cap-2 Maneuver	-	-	614	-
Stage 1	-	-	-	-
Stage 2	-	-	594	-

Approach	SB	SW
HCM Control Delay, s	0	21.9
HCM LOS		C

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	614
HCM Lane V/C Ratio	-	0.669
HCM Control Delay (s)	-	21.9
HCM Lane LOS	-	C
HCM 95th %tile Q(veh)	-	5.1



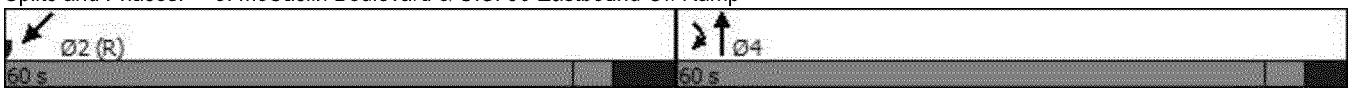
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1007	279	878
Future Volume (vph)	1007	279	878
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		121	
Lane Group Flow (vph)	1095	303	954
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	35.8	35.8	67.4
Actuated g/C Ratio	0.30	0.30	0.56
v/c Ratio	0.72	0.26	0.33
Control Delay	40.2	18.5	7.4
Queue Delay	0.0	0.0	0.0
Total Delay	40.2	18.5	7.4
LOS	D	B	A
Approach Delay	40.2		7.4
Approach LOS	D		A
Queue Length 50th (ft)	277	45	54
Queue Length 95th (ft)	300	68	71
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1647	2856
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.49	0.18	0.33

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



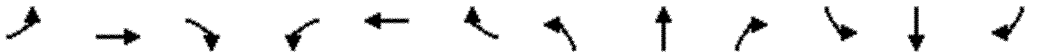
Intersection	
Int Delay, s/veh	5

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1007	0	0	330	0
Future Vol, veh/h	0	1007	0	0	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1095	0	0	359	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	438	-
Stage 1	-	-	0	-
Stage 2	-	-	438	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	586	0
Stage 1	0	-	-	0
Stage 2	0	-	565	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	586	-
Mov Cap-2 Maneuver	-	-	586	-
Stage 1	-	-	-	-
Stage 2	-	-	565	-

Approach	NB	NE
HCM Control Delay, s	0	20.4
HCM LOS		C

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	586	-
HCM Lane V/C Ratio	0.612	-
HCM Control Delay (s)	20.4	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	4.1	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	31	55	22	24	129	116	673	82	204	511	288
Future Volume (vph)	68	31	55	22	24	129	116	673	82	204	511	288
Satd. Flow (prot)	3221	1682	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.992		0.950			0.434			0.340		
Satd. Flow (perm)	3221	1682	1583	1770	1863	1583	1568	5085	1583	633	5085	1583
Satd. Flow (RTOR)			145			140			127			313
Lane Group Flow (vph)	67	41	60	24	26	140	126	732	89	222	555	313
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	8.5	8.5	8.5	7.8	7.8	7.8	85.5	76.9	76.9	91.5	80.1	120.0
Actuated g/C Ratio	0.07	0.07	0.07	0.06	0.06	0.06	0.71	0.64	0.64	0.76	0.67	1.00
v/c Ratio	0.30	0.35	0.24	0.21	0.21	0.60	0.10	0.22	0.08	0.39	0.16	0.20
Control Delay	55.5	60.4	2.3	56.1	56.0	19.5	4.7	10.5	1.0	6.5	8.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	60.4	2.3	56.1	56.0	19.5	4.7	10.5	1.0	6.5	8.5	0.3
LOS	E	E	A	E	E	B	A	B	A	A	A	A
Approach Delay		37.7			29.2			8.9			5.7	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	27	34	0	18	20	0	10	82	0	40	55	0
Queue Length 95th (ft)	51	73	0	45	48	61	23	136	11	83	90	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	364	456	324	341	404	1343	3256	1059	640	3392	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.11	0.13	0.07	0.08	0.35	0.09	0.22	0.08	0.35	0.16	0.20

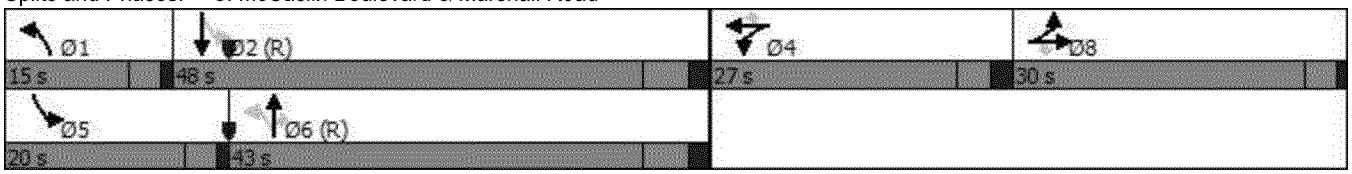
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 44.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	5.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	13	156	804	540
Demand Flow Rate, veh/h	13	159	820	550
Vehicles Circulating, veh/h	564	758	238	40
Vehicles Exiting, veh/h	26	300	339	757
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.2	1.3	7.0	4.5
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.469	0.531
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	120	4.645	4.328	4.645	4.328
Entry Flow, veh/h	13	39	1938	385	435	258	292
Cap Entry Lane, veh/h	879	746	0.980	1084	1160	1301	1373
Entry HV Adj Factor	1.000	0.973	118	0.982	0.980	0.984	0.980
Flow Entry, veh/h	13	38	1900	378	426	254	286
Cap Entry, veh/h	879	725	0.062	1065	1137	1280	1346
V/C Ratio	0.015	0.052	0.0	0.355	0.375	0.198	0.213
Control Delay, s/veh	4.2	5.5	A	7.0	6.9	4.5	4.5
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		2	2	1	1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	127	28	0	72	0	7	0	0	0	0	0
Future Vol, veh/h	0	127	28	0	72	0	7	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	138	30	0	78	0	8	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	78	0	0	168	0	0	231	231	84	147	246	78
Stage 1	-	-	-	-	-	-	153	153	-	78	78	-
Stage 2	-	-	-	-	-	-	78	78	-	69	168	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1519	-	-	1408	-	-	714	668	959	814	656	982
Stage 1	-	-	-	-	-	-	835	770	-	930	830	-
Stage 2	-	-	-	-	-	-	930	830	-	933	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1519	-	-	1408	-	-	714	668	959	814	656	982
Mov Cap-2 Maneuver	-	-	-	-	-	-	714	668	-	814	656	-
Stage 1	-	-	-	-	-	-	835	770	-	930	830	-
Stage 2	-	-	-	-	-	-	930	830	-	933	759	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.1	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	714	1519	-	-	1408	-	-	-
HCM Lane V/C Ratio	0.011	-	-	-	-	-	-	-
HCM Control Delay (s)	10.1	0	-	-	0	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	72	0	0	127
Future Vol, veh/h	0	0	72	0	0	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	78	0	0	138

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	216	78	0	0	78	0
Stage 1	78	-	-	-	-	-
Stage 2	138	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	772	983	-	-	1520	-
Stage 1	945	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	772	983	-	-	1520	-
Mov Cap-2 Maneuver	772	-	-	-	-	-
Stage 1	945	-	-	-	-	-
Stage 2	889	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1520	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

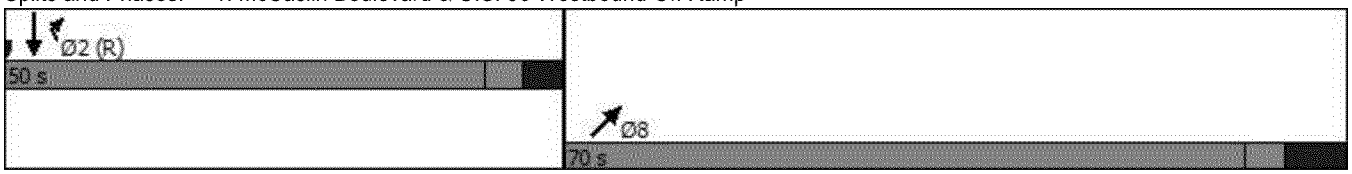
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	1446	464	1039
Future Volume (vph)	1446	464	1039
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		125	
Lane Group Flow (vph)	1572	504	1129
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	67.9	67.9	35.6
Actuated g/C Ratio	0.57	0.57	0.30
v/c Ratio	0.55	0.24	0.75
Control Delay	18.0	10.6	51.7
Queue Delay	0.0	0.0	0.0
Total Delay	18.0	10.6	51.7
LOS	B	B	D
Approach Delay	18.0		51.7
Approach LOS	B		D
Queue Length 50th (ft)	269	60	228
Queue Length 95th (ft)	356	97	217
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2876	2096	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.55	0.24	0.44

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 28.7	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	10.7

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	1446	393	0
Future Vol, veh/h	0	0	0	1446	393	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1572	427	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	629	-
Stage 1	-	-	0	-
Stage 2	-	-	629	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	474	0
Stage 1	0	-	-	0
Stage 2	0	-	450	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	474	-
Mov Cap-2 Maneuver	-	-	474	-
Stage 1	-	-	-	-
Stage 2	-	-	450	-

Approach	SB	SW
HCM Control Delay, s	0	50.2
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	474
HCM Lane V/C Ratio	-	0.901
HCM Control Delay (s)	-	50.2
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	10.1



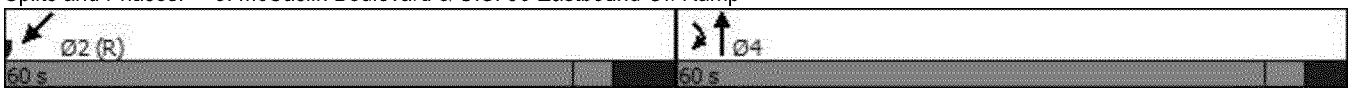
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1159	606	1211
Future Volume (vph)	1159	606	1211
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1260	659	1316
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	43.1	43.1	60.1
Actuated g/C Ratio	0.36	0.36	0.50
v/c Ratio	0.69	0.50	0.52
Control Delay	34.5	27.8	9.0
Queue Delay	0.0	0.0	0.0
Total Delay	34.5	27.8	9.0
LOS	C	C	A
Approach Delay	34.5		9.0
Approach LOS	C		A
Queue Length 50th (ft)	302	157	71
Queue Length 95th (ft)	310	178	88
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1611	2548
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.57	0.41	0.52

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 22.8	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	5.6

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1159	0	0	343	0
Future Vol, veh/h	0	1159	0	0	343	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1260	0	0	373	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	504	-
Stage 1	-	-	0	-
Stage 2	-	-	504	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	545	0
Stage 1	0	-	-	0
Stage 2	0	-	522	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	545	-
Mov Cap-2 Maneuver	-	-	545	-
Stage 1	-	-	-	-
Stage 2	-	-	522	-

Approach	NB	NE
HCM Control Delay, s	0	24.7
HCM LOS		C

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	545	-
HCM Lane V/C Ratio	0.684	-
HCM Control Delay (s)	24.7	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	5.2	-

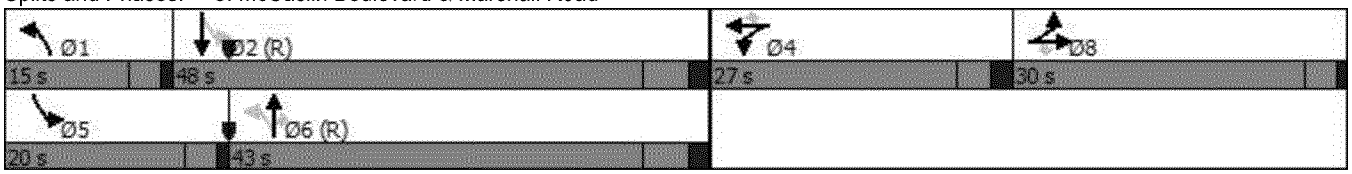
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	380	43	390	40	25	189	267	68	56	108	898	630
Future Volume (vph)	380	43	390	40	25	189	267	68	56	108	898	630
Satd. Flow (prot)	3221	1637	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.966		0.950			0.244			0.704		
Satd. Flow (perm)	3221	1637	1583	1770	1863	1583	882	5085	1583	1311	5085	1583
Satd. Flow (RTOR)			424			205			127			448
Lane Group Flow (vph)	306	154	424	43	27	205	290	74	61	117	976	685
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	18.3	18.3	18.3	8.9	8.9	8.9	76.6	65.2	65.2	75.0	64.4	120.0
Actuated g/C Ratio	0.15	0.15	0.15	0.07	0.07	0.07	0.64	0.54	0.54	0.62	0.54	1.00
v/c Ratio	0.62	0.62	0.71	0.33	0.20	0.67	0.38	0.03	0.07	0.14	0.36	0.43
Control Delay	52.7	57.6	11.0	58.1	53.8	18.1	10.0	15.6	0.1	9.3	17.9	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.7	57.6	11.0	58.1	53.8	18.1	10.0	15.6	0.1	9.3	17.9	0.9
LOS	D	E	B	E	D	B	B	B	A	A	B	A
Approach Delay		33.5			27.8			9.6			10.8	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)	124	125	0	32	20	0	37	9	0	29	147	0
Queue Length 95th (ft)	162	189	91	67	48	72	74	23	0	70	240	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	354	675	324	341	457	816	2762	917	931	2728	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.44	0.63	0.13	0.08	0.45	0.36	0.03	0.07	0.13	0.36	0.43

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	7.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	24	345	761	1294
Demand Flow Rate, veh/h	24	352	777	1319
Vehicles Circulating, veh/h	1402	711	237	97
Vehicles Exiting, veh/h	14	303	1189	710
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.1	1.6	6.7	8.6
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	256	4.645	4.328	4.645	4.328
Entry Flow, veh/h	24	96	1938	365	412	620	699
Cap Entry Lane, veh/h	431	776	0.980	1085	1161	1235	1308
Entry HV Adj Factor	0.999	0.979	251	0.980	0.980	0.981	0.981
Flow Entry, veh/h	24	94	1900	358	404	608	686
Cap Entry, veh/h	431	759	0.132	1064	1137	1211	1283
V/C Ratio	0.056	0.124	0.0	0.336	0.355	0.502	0.535
Control Delay, s/veh	9.1	6.0	A	6.8	6.7	8.4	8.7
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		1	2	3	3

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	78	17	0	208	1	26	1	3	0	0	6
Future Vol, veh/h	9	78	17	0	208	1	26	1	3	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	85	18	0	226	1	28	1	3	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	227	0	0	103	0	0	344	341	52	290	350	227
Stage 1	-	-	-	-	-	-	114	114	-	227	227	-
Stage 2	-	-	-	-	-	-	230	227	-	63	123	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1340	-	-	1488	-	-	598	580	1005	651	574	812
Stage 1	-	-	-	-	-	-	879	801	-	775	716	-
Stage 2	-	-	-	-	-	-	772	716	-	941	794	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1340	-	-	1488	-	-	590	575	1005	644	569	812
Mov Cap-2 Maneuver	-	-	-	-	-	-	590	575	-	644	569	-
Stage 1	-	-	-	-	-	-	872	795	-	769	716	-
Stage 2	-	-	-	-	-	-	766	716	-	929	788	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	11.2	9.5
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	615	1340	-	-	1488	-	-	812
HCM Lane V/C Ratio	0.053	0.007	-	-	-	-	-	0.008
HCM Control Delay (s)	11.2	7.7	0	-	0	-	-	9.5
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	209	0	0	81
Future Vol, veh/h	0	0	209	0	0	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	227	0	0	88

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	315	227	0	0	227	0
Stage 1	227	-	-	-	-	-
Stage 2	88	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	678	812	-	-	1341	-
Stage 1	811	-	-	-	-	-
Stage 2	935	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	678	812	-	-	1341	-
Mov Cap-2 Maneuver	678	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	935	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1341	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



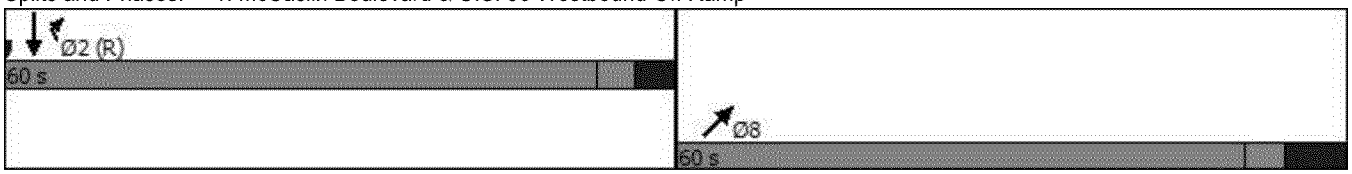
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	1314	897	1255
Future Volume (vph)	1314	897	1255
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1428	975	1364
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	62.5	62.5	41.0
Actuated g/C Ratio	0.52	0.52	0.34
v/c Ratio	0.54	0.51	0.78
Control Delay	20.8	19.5	24.0
Queue Delay	0.0	0.0	0.0
Total Delay	20.8	19.5	24.0
LOS	C	B	C
Approach Delay	20.8		24.0
Approach LOS	C		C
Queue Length 50th (ft)	261	196	143
Queue Length 95th (ft)	342	275	143
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2646	1906	2148
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.54	0.51	0.64

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 21.6	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	35.7

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	1314	544	0
Future Vol, veh/h	0	0	0	1314	544	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1428	591	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	571	-
Stage 1	-	-	0	-
Stage 2	-	-	571	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 506	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 482	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 506	-
Mov Cap-2 Maneuver	-	-	~ 506	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 482	-

Approach	SB	SW
HCM Control Delay, s	0	122
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	506
HCM Lane V/C Ratio	-	1.169
HCM Control Delay (s)	-	122
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	21.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



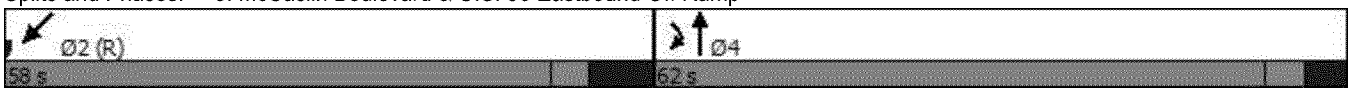
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1437	372	1236
Future Volume (vph)	1437	372	1236
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1562	404	1343
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	62.0	62.0	58.0
Total Split (%)	51.7%	51.7%	48.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	48.9	48.9	54.3
Actuated g/C Ratio	0.41	0.41	0.45
v/c Ratio	0.75	0.27	0.58
Control Delay	32.7	19.9	15.4
Queue Delay	0.0	0.0	0.0
Total Delay	32.7	19.9	15.4
LOS	C	B	B
Approach Delay	32.7		15.4
Approach LOS	C		B
Queue Length 50th (ft)	369	75	125
Queue Length 95th (ft)	395	98	148
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2309	1670	2300
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.68	0.24	0.58

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	23.9

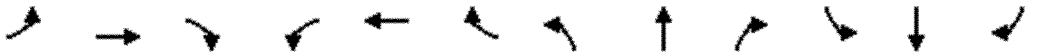
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1437	0	0	476	0
Future Vol, veh/h	0	1437	0	0	476	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1562	0	0	517	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	625	-
Stage 1	-	-	0	-
Stage 2	-	-	625	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 476	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 452	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 476	-
Mov Cap-2 Maneuver	-	-	~ 476	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 452	-

Approach	NB	NE
HCM Control Delay, s	0	96
HCM LOS		F

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	476	-
HCM Lane V/C Ratio	1.087	-
HCM Control Delay (s)	96	-
HCM Lane LOS	F	-
HCM 95th %tile Q(veh)	16.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	44	689	32	34	175	106	950	119	277	693	416
Future Volume (vph)	98	44	689	32	34	175	106	950	119	277	693	416
Satd. Flow (prot)	3221	1680	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.991		0.950			0.354			0.135		
Satd. Flow (perm)	3221	1680	1583	1770	1863	1583	1279	5085	1583	251	5085	1583
Satd. Flow (RTOR)			467			190			127			383
Lane Group Flow (vph)	96	59	749	35	37	190	115	1033	129	301	753	452
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	39.5	39.5	39.5	8.5	8.5	8.5	46.6	37.0	37.0	59.0	45.4	120.0
Actuated g/C Ratio	0.33	0.33	0.33	0.07	0.07	0.07	0.39	0.31	0.31	0.49	0.38	1.00
v/c Ratio	0.09	0.11	0.90	0.28	0.28	0.66	0.18	0.66	0.22	0.93	0.39	0.29
Control Delay	29.2	30.0	29.5	57.1	56.9	18.7	17.4	38.5	6.5	60.7	28.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	30.0	29.5	57.1	56.9	18.7	17.4	38.5	6.5	60.7	28.1	0.5
LOS	C	C	C	E	E	B	B	D	A	E	C	A
Approach Delay		29.5			29.2			33.3			26.3	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	28	34	238	26	28	0	23	253	1	157	154	0
Queue Length 95th (ft)	53	74	#535	58	61	69	39	304	46	#327	194	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	1060	553	834	324	341	445	730	1567	575	325	1923	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.11	0.90	0.11	0.11	0.43	0.16	0.66	0.22	0.93	0.39	0.29

Intersection Summary

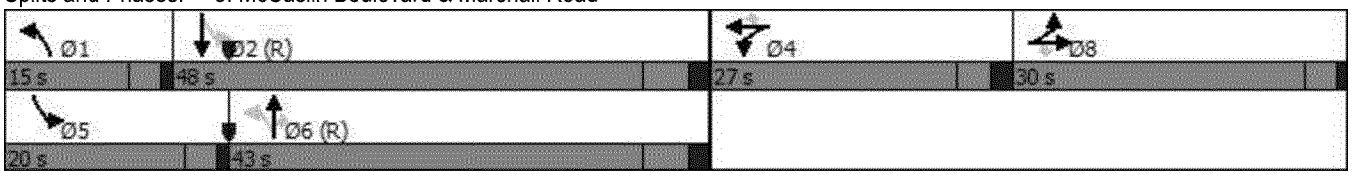
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 29.5	Intersection LOS: C
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	20	192	1141	726
Demand Flow Rate, veh/h	20	196	1164	741
Vehicles Circulating, veh/h	749	1094	290	48
Vehicles Exiting, veh/h	40	360	479	1092
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.1	1.8	10.1	5.2
Approach LOS	A	A	B	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	150	4.645	4.328	4.645	4.328
Entry Flow, veh/h	20	46	1938	547	617	348	393
Cap Entry Lane, veh/h	751	560	0.980	1034	1110	1292	1363
Entry HV Adj Factor	1.000	0.976	147	0.980	0.980	0.981	0.980
Flow Entry, veh/h	20	45	1900	536	605	341	385
Cap Entry, veh/h	751	547	0.077	1013	1088	1267	1336
V/C Ratio	0.027	0.082	0.0	0.529	0.556	0.269	0.288
Control Delay, s/veh	5.1	7.6	A	10.1	10.2	5.2	5.2
LOS	A	A	0	B	B	A	A
95th %tile Queue, veh	0	0		3	4	1	1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	169	41	0	92	0	11	0	0	0	0	0
Future Vol, veh/h	0	169	41	0	92	0	11	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	184	45	0	100	0	12	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	100	0	0	229	0	0	307	307	115	192	329	100
Stage 1	-	-	-	-	-	-	207	207	-	100	100	-
Stage 2	-	-	-	-	-	-	100	100	-	92	229	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1492	-	-	1338	-	-	634	606	916	759	589	955
Stage 1	-	-	-	-	-	-	776	730	-	906	812	-
Stage 2	-	-	-	-	-	-	906	812	-	905	714	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1492	-	-	1338	-	-	634	606	916	759	589	955
Mov Cap-2 Maneuver	-	-	-	-	-	-	634	606	-	759	589	-
Stage 1	-	-	-	-	-	-	776	730	-	906	812	-
Stage 2	-	-	-	-	-	-	906	812	-	905	714	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.8	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	634	1492	-	-	1338	-	-	-
HCM Lane V/C Ratio	0.019	-	-	-	-	-	-	-
HCM Control Delay (s)	10.8	0	-	-	0	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	92	0	0	169
Future Vol, veh/h	0	0	92	0	0	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	100	0	0	184

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	284	100	0	0	100	0
Stage 1	100	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	706	956	-	-	1493	-
Stage 1	924	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	706	956	-	-	1493	-
Mov Cap-2 Maneuver	706	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	848	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1493	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

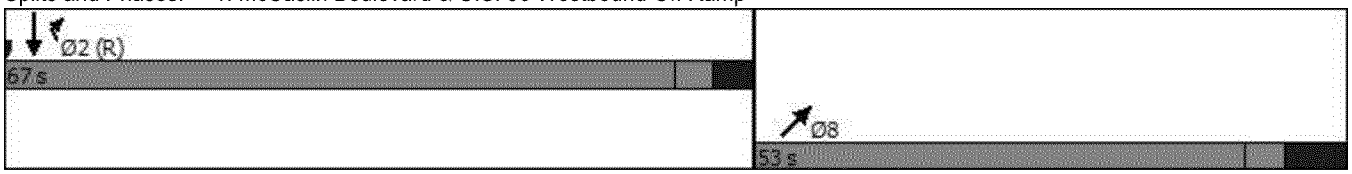
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	2085	669	1499
Future Volume (vph)	2085	669	1499
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	2266	727	1629
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	67.0	67.0	53.0
Total Split (%)	55.8%	55.8%	44.2%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	60.5	60.5	43.0
Actuated g/C Ratio	0.50	0.50	0.36
v/c Ratio	0.88	0.39	0.89
Control Delay	32.1	17.7	27.1
Queue Delay	0.0	0.0	0.0
Total Delay	32.1	17.7	27.1
LOS	C	B	C
Approach Delay	32.1		27.1
Approach LOS	C		C
Queue Length 50th (ft)	563	137	162
Queue Length 95th (ft)	640	176	269
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2563	1847	1851
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.88	0.39	0.88

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 28.1	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	76

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	2085	549	0
Future Vol, veh/h	0	0	0	2085	549	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	2266	597	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	906	-
Stage 1	-	-	0	-
Stage 2	-	-	906	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 346	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 321	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 346	-
Mov Cap-2 Maneuver	-	-	~ 346	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 321	-

Approach	SB	SW
HCM Control Delay, s	0	$ 364.6
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	346
HCM Lane V/C Ratio	-	1.725
HCM Control Delay (s)	-	$ 364.6
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	37.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



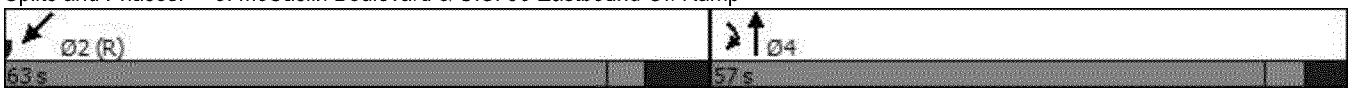
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1636	857	1729
Future Volume (vph)	1636	857	1729
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1778	932	1879
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	57.0	57.0	63.0
Total Split (%)	47.5%	47.5%	52.5%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	49.5	49.5	53.7
Actuated g/C Ratio	0.41	0.41	0.45
v/c Ratio	0.85	0.61	0.83
Control Delay	36.7	27.9	25.3
Queue Delay	0.0	0.0	0.0
Total Delay	36.7	27.9	25.3
LOS	D	C	C
Approach Delay	36.7		25.3
Approach LOS	D		C
Queue Length 50th (ft)	449	230	235
Queue Length 95th (ft)	515	288	295
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2097	1522	2275
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.85	0.61	0.83

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 30.2	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	36.3

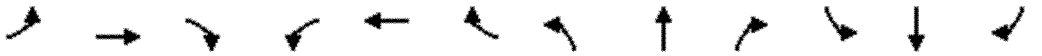
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1636	0	0	495	0
Future Vol, veh/h	0	1636	0	0	495	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1778	0	0	538	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	711	-
Stage 1	-	-	0	-
Stage 2	-	-	711	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 432	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 407	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 432	-
Mov Cap-2 Maneuver	-	-	~ 432	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 407	-

Approach	NB	NE
HCM Control Delay, s	0	156.4
HCM LOS		F

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	432	-
HCM Lane V/C Ratio	1.245	-
HCM Control Delay (s)	156.4	-
HCM Lane LOS	F	-
HCM 95th %tile Q(veh)	22.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	548	61	561	57	34	249	382	941	81	148	1283	909
Future Volume (vph)	548	61	561	57	34	249	382	941	81	148	1283	909
Satd. Flow (prot)	3221	1637	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.966		0.950			0.094			0.203		
Satd. Flow (perm)	3221	1637	1583	1770	1863	1583	340	5085	1583	378	5085	1583
Satd. Flow (RTOR)			391			189			127			452
Lane Group Flow (vph)	441	221	610	62	37	271	415	1023	88	161	1395	988
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	27.6	27.6	27.6	13.0	13.0	13.0	62.8	49.2	49.2	61.3	48.1	120.0
Actuated g/C Ratio	0.23	0.23	0.23	0.11	0.11	0.11	0.52	0.41	0.41	0.51	0.40	1.00
v/c Ratio	0.60	0.59	0.92	0.32	0.18	0.80	0.84	0.49	0.12	0.50	0.68	0.62
Control Delay	44.6	47.7	35.8	51.4	47.6	33.5	41.8	29.5	2.1	21.0	33.3	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	47.7	35.8	51.4	47.6	33.5	41.8	29.5	2.1	21.0	33.3	1.9
LOS	D	D	D	D	D	C	D	C	A	C	C	A
Approach Delay		40.9			37.9			31.3			20.3	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	154	154	170	45	27	61	111	233	0	67	352	0
Queue Length 95th (ft)	230	267	#433	82	56	147	#224	299	16	110	411	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	786	399	682	324	341	444	495	2083	723	392	2038	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.55	0.89	0.19	0.11	0.61	0.84	0.49	0.12	0.41	0.68	0.62

Intersection Summary

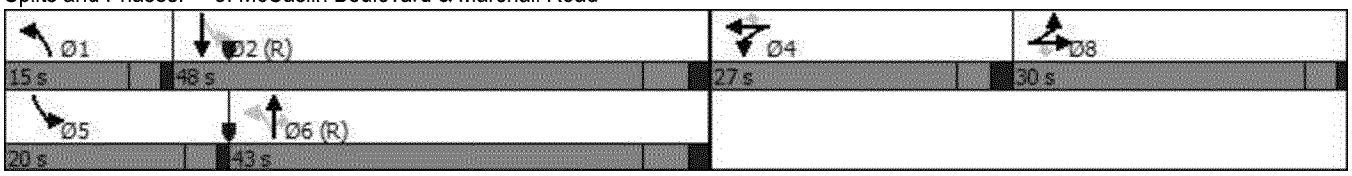
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 29.0	Intersection LOS: C
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	38	423	1087	1836
Demand Flow Rate, veh/h	39	431	1109	1873
Vehicles Circulating, veh/h	1970	1027	314	119
Vehicles Exiting, veh/h	22	396	1695	1025
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	17.0	2.4	10.0	15.0
Approach LOS	C	A	A	C

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	314	4.645	4.328	4.645	4.328
Entry Flow, veh/h	39	117	1938	521	588	880	993
Cap Entry Lane, veh/h	266	593	0.980	1011	1087	1210	1283
Entry HV Adj Factor	0.973	0.982	308	0.981	0.980	0.981	0.980
Flow Entry, veh/h	38	115	1900	511	576	863	973
Cap Entry, veh/h	259	582	0.162	992	1066	1186	1258
V/C Ratio	0.147	0.197	0.0	0.515	0.541	0.727	0.774
Control Delay, s/veh	17.0	8.7	A	10.0	10.0	14.3	15.7
LOS	C	A	1	A	A	B	C
95th %tile Queue, veh	1	1		3	3	7	8

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	106	26	0	274	1	38	2	5	0	0	6
Future Vol, veh/h	9	106	26	0	274	1	38	2	5	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	115	28	0	298	1	41	2	5	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	299	0	0	143	0	0	451	448	72	378	462	299
Stage 1	-	-	-	-	-	-	149	149	-	299	299	-
Stage 2	-	-	-	-	-	-	302	299	-	79	163	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1261	-	-	1438	-	-	505	505	976	567	496	740
Stage 1	-	-	-	-	-	-	839	773	-	709	666	-
Stage 2	-	-	-	-	-	-	706	666	-	921	763	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1261	-	-	1438	-	-	497	500	976	558	492	740
Mov Cap-2 Maneuver	-	-	-	-	-	-	497	500	-	558	492	-
Stage 1	-	-	-	-	-	-	831	766	-	703	666	-
Stage 2	-	-	-	-	-	-	700	666	-	905	756	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	12.5	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	526	1261	-	-	1438	-	-	740
HCM Lane V/C Ratio	0.093	0.008	-	-	-	-	-	0.009
HCM Control Delay (s)	12.5	7.9	0	-	0	-	-	9.9
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	275	0	0	111
Future Vol, veh/h	0	0	275	0	0	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	299	0	0	121

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	420	299	0	0	299	0
Stage 1	299	-	-	-	-	-
Stage 2	121	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	590	741	-	-	1262	-
Stage 1	752	-	-	-	-	-
Stage 2	904	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	590	741	-	-	1262	-
Mov Cap-2 Maneuver	590	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	904	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1262	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

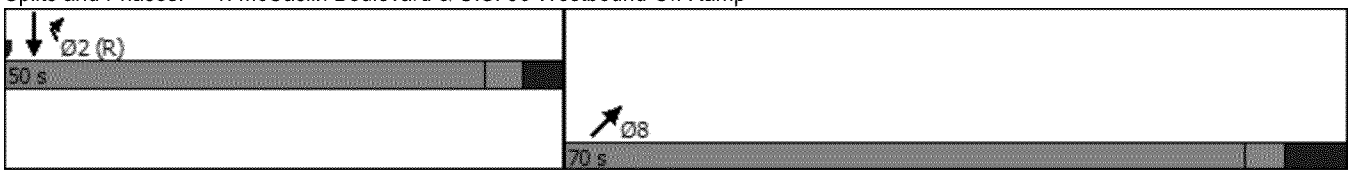
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	913	622	872
Future Volume (vph)	913	622	872
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		207	
Lane Group Flow (vph)	992	676	948
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	73.1	73.1	30.4
Actuated g/C Ratio	0.61	0.61	0.25
v/c Ratio	0.32	0.30	0.74
Control Delay	12.2	8.3	64.8
Queue Delay	0.0	0.0	0.0
Total Delay	12.2	8.3	64.8
LOS	B	A	E
Approach Delay	12.2		64.8
Approach LOS	B		E
Queue Length 50th (ft)	128	67	229
Queue Length 95th (ft)	178	109	221
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	3096	2279	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.32	0.30	0.37

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 30.3	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	6.8

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	913	387	0
Future Vol, veh/h	0	0	0	913	387	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	992	421	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	397	-
Stage 1	-	-	0	-
Stage 2	-	-	397	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	613	0
Stage 1	0	-	-	0
Stage 2	0	-	593	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	613	-
Mov Cap-2 Maneuver	-	-	613	-
Stage 1	-	-	-	-
Stage 2	-	-	593	-

Approach	SB	SW
HCM Control Delay, s	0	22.7
HCM LOS		C

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	613
HCM Lane V/C Ratio	-	0.686
HCM Control Delay (s)	-	22.7
HCM Lane LOS	-	C
HCM 95th %tile Q(veh)	-	5.4



Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1016	287	889
Future Volume (vph)	1016	287	889
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		116	
Lane Group Flow (vph)	1104	312	966
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	36.0	36.0	67.2
Actuated g/C Ratio	0.30	0.30	0.56
v/c Ratio	0.72	0.27	0.34
Control Delay	40.1	19.3	7.6
Queue Delay	0.0	0.0	0.0
Total Delay	40.1	19.3	7.6
LOS	D	B	A
Approach Delay	40.1		7.6
Approach LOS	D		A
Queue Length 50th (ft)	279	49	56
Queue Length 95th (ft)	301	72	72
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1644	2847
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.50	0.19	0.34

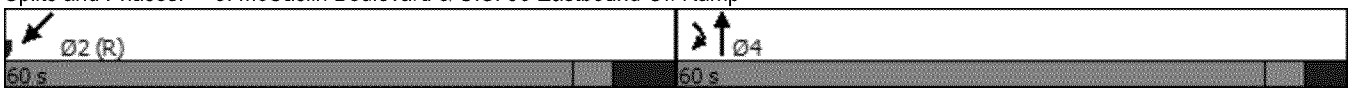
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	5

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1016	0	0	330	0
Future Vol, veh/h	0	1016	0	0	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1104	0	0	359	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	442	-
Stage 1	-	-	0	-
Stage 2	-	-	442	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	584	0
Stage 1	0	-	-	0
Stage 2	0	-	562	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	584	-
Mov Cap-2 Maneuver	-	-	584	-
Stage 1	-	-	-	-
Stage 2	-	-	562	-

Approach	NB	NE
HCM Control Delay, s	0	20.5
HCM LOS		C

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	584	-
HCM Lane V/C Ratio	0.614	-
HCM Control Delay (s)	20.5	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	4.2	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	32	55	23	25	145	116	673	83	223	511	288
Future Volume (vph)	68	32	55	23	25	145	116	673	83	223	511	288
Satd. Flow (prot)	3221	1682	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.992		0.950			0.434			0.337		
Satd. Flow (perm)	3221	1682	1583	1770	1863	1583	1568	5085	1583	628	5085	1583
Satd. Flow (RTOR)			145			158			127			313
Lane Group Flow (vph)	67	42	60	25	27	158	126	732	90	242	555	313
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	8.5	8.5	8.5	8.0	8.0	8.0	84.8	76.1	76.1	91.4	79.8	120.0
Actuated g/C Ratio	0.07	0.07	0.07	0.07	0.07	0.07	0.71	0.63	0.63	0.76	0.66	1.00
v/c Ratio	0.29	0.35	0.24	0.21	0.22	0.63	0.10	0.23	0.09	0.42	0.16	0.20
Control Delay	55.4	60.5	2.3	55.9	55.8	19.3	4.8	10.9	1.1	6.9	8.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.4	60.5	2.3	55.9	55.8	19.3	4.8	10.9	1.1	6.9	8.7	0.3
LOS	E	E	A	E	E	B	A	B	A	A	A	A
Approach Delay		37.8			28.4			9.2			5.9	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	27	35	0	19	20	0	10	83	0	44	55	0
Queue Length 95th (ft)	51	74	0	46	49	64	24	140	11	93	91	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	364	456	324	341	419	1334	3226	1050	636	3381	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.12	0.13	0.08	0.08	0.38	0.09	0.23	0.09	0.38	0.16	0.20

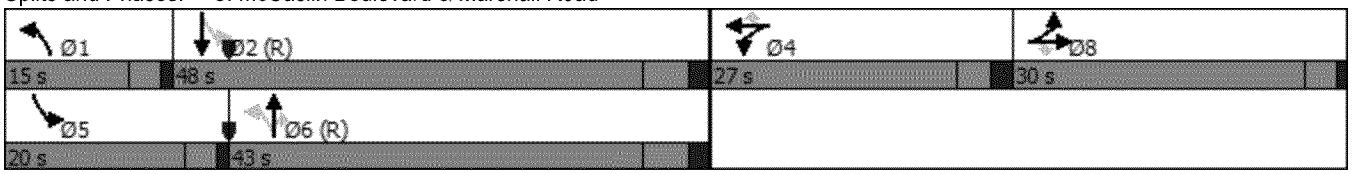
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 45.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	5.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	13	156	806	541
Demand Flow Rate, veh/h	13	159	822	551
Vehicles Circulating, veh/h	565	760	238	40
Vehicles Exiting, veh/h	26	300	340	759
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.2	1.3	7.0	4.5
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	120	4.645	4.328	4.645	4.328
Entry Flow, veh/h	13	39	1938	386	436	259	292
Cap Entry Lane, veh/h	878	744	0.980	1084	1160	1301	1373
Entry HV Adj Factor	1.000	0.973	118	0.982	0.980	0.982	0.982
Flow Entry, veh/h	13	38	1900	379	427	254	287
Cap Entry, veh/h	878	724	0.062	1065	1137	1277	1348
V/C Ratio	0.015	0.052	0.0	0.356	0.376	0.199	0.213
Control Delay, s/veh	4.2	5.5	A	7.0	6.9	4.5	4.5
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		2	2	1	1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	148	28	0	86	0	7	0	0	0	0	4
Future Vol, veh/h	0	148	28	0	86	0	7	0	0	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	161	30	0	93	0	8	0	0	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	93	0	0	191	0	0	271	269	96	174	284	93
Stage 1	-	-	-	-	-	-	176	176	-	93	93	-
Stage 2	-	-	-	-	-	-	95	93	-	81	191	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1500	-	-	1381	-	-	671	637	942	781	624	964
Stage 1	-	-	-	-	-	-	809	753	-	913	818	-
Stage 2	-	-	-	-	-	-	911	818	-	919	742	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1500	-	-	1381	-	-	668	637	942	781	624	964
Mov Cap-2 Maneuver	-	-	-	-	-	-	668	637	-	781	624	-
Stage 1	-	-	-	-	-	-	809	753	-	913	818	-
Stage 2	-	-	-	-	-	-	907	818	-	919	742	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.5	8.8
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	668	1500	-	-	1381	-	-	964
HCM Lane V/C Ratio	0.011	-	-	-	-	-	-	0.005
HCM Control Delay (s)	10.5	0	-	-	0	-	-	8.8
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	14	72	0	21	127
Future Vol, veh/h	0	14	72	0	21	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	78	0	23	138

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	262	78	0	0	78	0
Stage 1	78	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	727	983	-	-	1520	-
Stage 1	945	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	716	983	-	-	1520	-
Mov Cap-2 Maneuver	716	-	-	-	-	-
Stage 1	945	-	-	-	-	-
Stage 2	835	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	983	1520	-
HCM Lane V/C Ratio	-	-	0.015	0.015	-
HCM Control Delay (s)	-	-	8.7	7.4	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

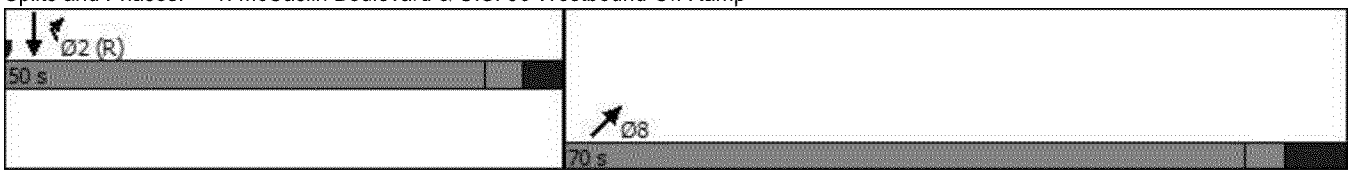
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	1448	464	1042
Future Volume (vph)	1448	464	1042
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		124	
Lane Group Flow (vph)	1574	504	1133
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	67.8	67.8	35.7
Actuated g/C Ratio	0.56	0.56	0.30
v/c Ratio	0.55	0.24	0.75
Control Delay	18.0	10.6	51.6
Queue Delay	0.0	0.0	0.0
Total Delay	18.0	10.6	51.6
LOS	B	B	D
Approach Delay	18.0		51.6
Approach LOS	B		D
Queue Length 50th (ft)	269	60	229
Queue Length 95th (ft)	357	97	218
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2872	2092	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.55	0.24	0.44

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 28.7	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	11.7

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	1448	401	0
Future Vol, veh/h	0	0	0	1448	401	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1574	436	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	630	-
Stage 1	-	-	0	-
Stage 2	-	-	630	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	473	0
Stage 1	0	-	-	0
Stage 2	0	-	449	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	473	-
Mov Cap-2 Maneuver	-	-	473	-
Stage 1	-	-	-	-
Stage 2	-	-	449	-

Approach	SB	SW
HCM Control Delay, s	0	53.8
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	473
HCM Lane V/C Ratio	-	0.922
HCM Control Delay (s)	-	53.8
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	10.7



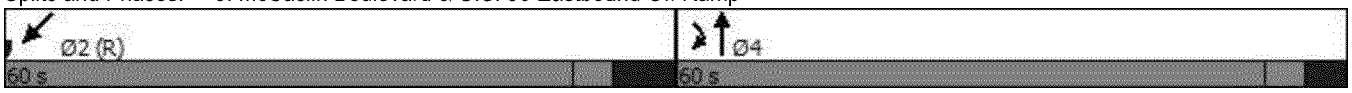
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1170	614	1221
Future Volume (vph)	1170	614	1221
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1272	667	1327
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	43.3	43.3	59.9
Actuated g/C Ratio	0.36	0.36	0.50
v/c Ratio	0.69	0.50	0.52
Control Delay	34.4	27.7	9.2
Queue Delay	0.0	0.0	0.0
Total Delay	34.4	27.7	9.2
LOS	C	C	A
Approach Delay	34.4		9.2
Approach LOS	C		A
Queue Length 50th (ft)	304	159	72
Queue Length 95th (ft)	313	180	93
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1611	2537
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.57	0.41	0.52

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 22.8	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



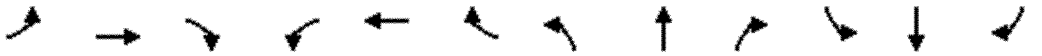
Intersection	
Int Delay, s/veh	5.7

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1170	0	0	343	0
Future Vol, veh/h	0	1170	0	0	343	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1272	0	0	373	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	509	-
Stage 1	-	-	0	-
Stage 2	-	-	509	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	542	0
Stage 1	0	-	-	0
Stage 2	0	-	519	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	542	-
Mov Cap-2 Maneuver	-	-	542	-
Stage 1	-	-	-	-
Stage 2	-	-	519	-

Approach	NB	NE
HCM Control Delay, s	0	25
HCM LOS		D

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	542	-
HCM Lane V/C Ratio	0.688	-
HCM Control Delay (s)	25	-
HCM Lane LOS	D	-
HCM 95th %tile Q(veh)	5.3	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	380	44	390	41	26	208	267	68	57	126	898	630
Future Volume (vph)	380	44	390	41	26	208	267	68	57	126	898	630
Satd. Flow (prot)	3221	1639	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.967		0.950			0.246			0.704		
Satd. Flow (perm)	3221	1639	1583	1770	1863	1583	889	5085	1583	1311	5085	1583
Satd. Flow (RTOR)			424			226			127			448
Lane Group Flow (vph)	306	155	424	45	28	226	290	74	62	137	976	685
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	18.3	18.3	18.3	9.1	9.1	9.1	75.8	64.4	64.4	75.4	64.2	120.0
Actuated g/C Ratio	0.15	0.15	0.15	0.08	0.08	0.08	0.63	0.54	0.54	0.63	0.54	1.00
v/c Ratio	0.62	0.62	0.71	0.34	0.20	0.69	0.38	0.03	0.07	0.16	0.36	0.43
Control Delay	52.7	57.7	11.0	58.0	53.6	17.9	10.2	16.1	0.1	9.5	18.0	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.7	57.7	11.0	58.0	53.6	17.9	10.2	16.1	0.1	9.5	18.0	0.9
LOS	D	E	B	E	D	B	B	B	A	A	B	A
Approach Delay		33.6			27.3			9.7			10.8	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)	124	126	0	34	21	0	37	9	0	34	147	0
Queue Length 95th (ft)	162	190	91	69	49	74	75	23	0	81	242	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	355	675	324	341	474	815	2730	908	929	2720	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.44	0.63	0.14	0.08	0.48	0.36	0.03	0.07	0.15	0.36	0.43

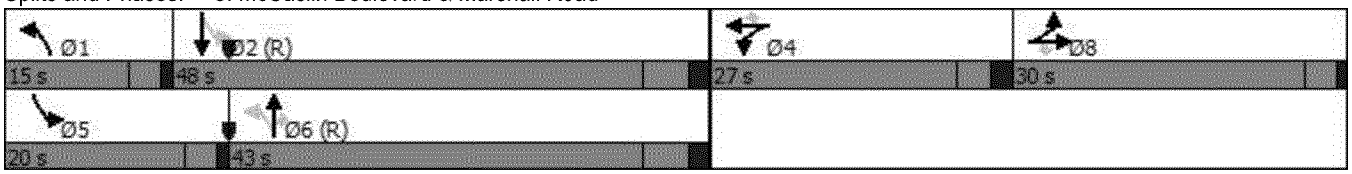
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	7.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	24	345	762	1295
Demand Flow Rate, veh/h	24	352	778	1320
Vehicles Circulating, veh/h	1403	712	237	97
Vehicles Exiting, veh/h	14	303	1190	711
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.1	1.6	6.7	8.6
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	256	4.645	4.328	4.645	4.328
Entry Flow, veh/h	24	96	1938	366	412	620	700
Cap Entry Lane, veh/h	431	775	0.980	1085	1161	1235	1308
Entry HV Adj Factor	0.999	0.979	251	0.979	0.981	0.981	0.980
Flow Entry, veh/h	24	94	1900	358	404	608	686
Cap Entry, veh/h	430	759	0.132	1063	1139	1212	1282
V/C Ratio	0.056	0.124	0.0	0.337	0.355	0.502	0.535
Control Delay, s/veh	9.1	6.0	A	6.8	6.7	8.4	8.7
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		2	2	3	3

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	88	17	0	225	1	26	1	3	0	0	10
Future Vol, veh/h	9	88	17	0	225	1	26	1	3	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	96	18	0	245	1	28	1	3	0	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	246	0	0	114	0	0	376	371	57	315	380	246
Stage 1	-	-	-	-	-	-	125	125	-	246	246	-
Stage 2	-	-	-	-	-	-	251	246	-	69	134	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1319	-	-	1474	-	-	569	558	998	626	552	792
Stage 1	-	-	-	-	-	-	866	792	-	757	702	-
Stage 2	-	-	-	-	-	-	752	702	-	933	785	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1319	-	-	1474	-	-	558	554	998	619	548	792
Mov Cap-2 Maneuver	-	-	-	-	-	-	558	554	-	619	548	-
Stage 1	-	-	-	-	-	-	859	786	-	751	702	-
Stage 2	-	-	-	-	-	-	742	702	-	921	779	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	11.5	9.6
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	584	1319	-	-	1474	-	-	792
HCM Lane V/C Ratio	0.056	0.007	-	-	-	-	-	0.014
HCM Control Delay (s)	11.5	7.8	0	-	0	-	-	9.6
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	17	209	0	20	81
Future Vol, veh/h	0	17	209	0	20	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	227	0	22	88

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	359	227	0	0	227	0
Stage 1	227	-	-	-	-	-
Stage 2	132	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	640	812	-	-	1341	-
Stage 1	811	-	-	-	-	-
Stage 2	894	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	630	812	-	-	1341	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	880	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	812	1341	-
HCM Lane V/C Ratio	-	-	0.023	0.016	-
HCM Control Delay (s)	-	-	9.5	7.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

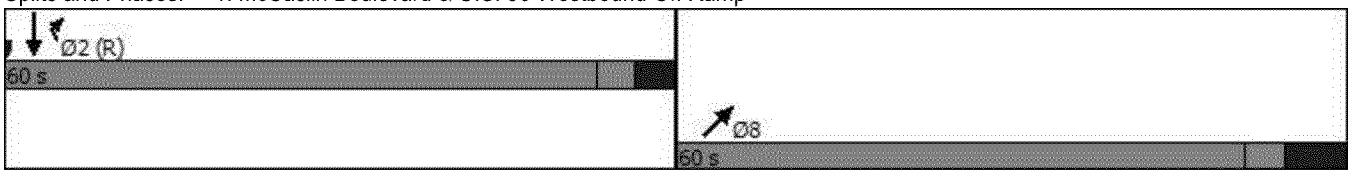
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	1316	897	1257
Future Volume (vph)	1316	897	1257
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1430	975	1366
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	62.4	62.4	41.1
Actuated g/C Ratio	0.52	0.52	0.34
v/c Ratio	0.54	0.51	0.79
Control Delay	20.9	19.5	24.1
Queue Delay	0.0	0.0	0.0
Total Delay	20.9	19.5	24.1
LOS	C	B	C
Approach Delay	20.9		24.1
Approach LOS	C		C
Queue Length 50th (ft)	262	196	144
Queue Length 95th (ft)	344	275	143
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2645	1905	2148
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.54	0.51	0.64

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	38.5

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	1316	553	0
Future Vol, veh/h	0	0	0	1316	553	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1430	601	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	572	-
Stage 1	-	-	0	-
Stage 2	-	-	572	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 505	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 482	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 505	-
Mov Cap-2 Maneuver	-	-	~ 505	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 482	-

Approach	SB	SW
HCM Control Delay, s	0	130.1
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	505
HCM Lane V/C Ratio	-	1.19
HCM Control Delay (s)	-	130.1
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	22.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



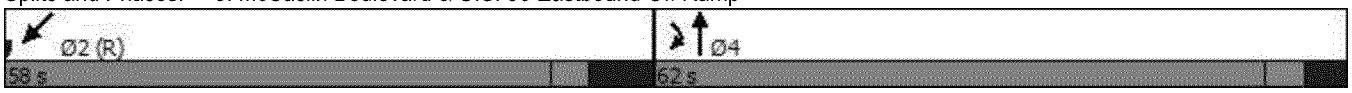
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1446	380	1247
Future Volume (vph)	1446	380	1247
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1572	413	1355
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	62.0	62.0	58.0
Total Split (%)	51.7%	51.7%	48.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	49.0	49.0	54.2
Actuated g/C Ratio	0.41	0.41	0.45
v/c Ratio	0.76	0.27	0.59
Control Delay	32.7	20.0	15.5
Queue Delay	0.0	0.0	0.0
Total Delay	32.7	20.0	15.5
LOS	C	C	B
Approach Delay	32.7		15.5
Approach LOS	C		B
Queue Length 50th (ft)	372	77	127
Queue Length 95th (ft)	398	100	150
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2309	1670	2295
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.68	0.25	0.59

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	24.2

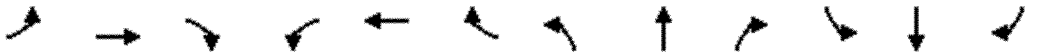
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1446	0	0	476	0
Future Vol, veh/h	0	1446	0	0	476	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1572	0	0	517	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	629	-
Stage 1	-	-	0	-
Stage 2	-	-	629	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 474	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 450	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 474	-
Mov Cap-2 Maneuver	-	-	~ 474	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 450	-

Approach	NB	NE
HCM Control Delay, s	0	97.7
HCM LOS		F

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	474	-
HCM Lane V/C Ratio	1.092	-
HCM Control Delay (s)	97.7	-
HCM Lane LOS	F	-
HCM 95th %tile Q(veh)	16.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	45	689	33	35	191	106	950	120	296	693	416
Future Volume (vph)	98	45	689	33	35	191	106	950	120	296	693	416
Satd. Flow (prot)	3221	1680	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.991		0.950			0.354			0.135		
Satd. Flow (perm)	3221	1680	1583	1770	1863	1583	1279	5085	1583	251	5085	1583
Satd. Flow (RTOR)			465			208			127			383
Lane Group Flow (vph)	96	60	749	36	38	208	115	1033	130	322	753	452
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	39.4	39.4	39.4	8.6	8.6	8.6	46.6	37.0	37.0	59.0	45.4	120.0
Actuated g/C Ratio	0.33	0.33	0.33	0.07	0.07	0.07	0.39	0.31	0.31	0.49	0.38	1.00
v/c Ratio	0.09	0.11	0.90	0.28	0.29	0.68	0.18	0.66	0.23	0.99	0.39	0.29
Control Delay	29.3	30.2	30.0	57.0	56.7	18.5	17.4	38.5	6.6	75.8	28.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	30.2	30.0	57.0	56.7	18.5	17.4	38.5	6.6	75.8	28.1	0.5
LOS	C	C	C	E	E	B	B	D	A	E	C	A
Approach Delay		30.0			28.6			33.3			30.0	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	28	35	240	27	29	0	23	253	2	176	154	0
Queue Length 95th (ft)	53	76	#540	59	62	72	39	304	47	#368	194	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	1056	551	831	324	341	460	730	1567	575	325	1923	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.11	0.90	0.11	0.11	0.45	0.16	0.66	0.23	0.99	0.39	0.29

Intersection Summary

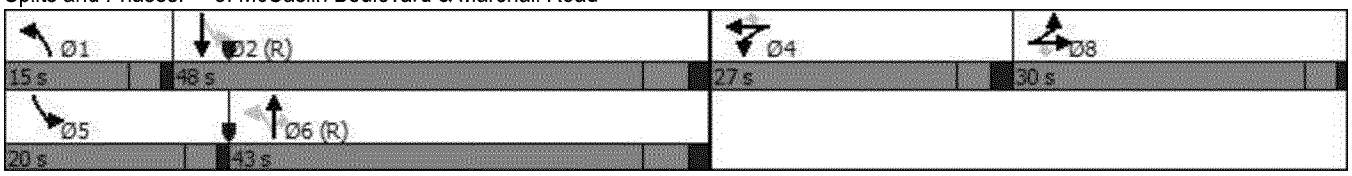
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 30.9	Intersection LOS: C
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	20	192	1142	727
Demand Flow Rate, veh/h	20	196	1165	742
Vehicles Circulating, veh/h	750	1095	290	48
Vehicles Exiting, veh/h	40	360	480	1093
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.1	1.8	10.1	5.2
Approach LOS	A	A	B	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	150	4.645	4.328	4.645	4.328
Entry Flow, veh/h	20	46	1938	548	617	349	393
Cap Entry Lane, veh/h	751	560	0.980	1034	1110	1292	1363
Entry HV Adj Factor	1.000	0.976	147	0.979	0.981	0.980	0.981
Flow Entry, veh/h	20	45	1900	537	605	342	386
Cap Entry, veh/h	751	546	0.077	1012	1089	1265	1337
V/C Ratio	0.027	0.082	0.0	0.530	0.556	0.270	0.288
Control Delay, s/veh	5.1	7.6	A	10.1	10.1	5.2	5.2
LOS	A	A	0	B	B	A	A
95th %tile Queue, veh	0	0		3	4	1	1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	190	41	0	106	0	11	0	0	0	0	4
Future Vol, veh/h	0	190	41	0	106	0	11	0	0	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	207	45	0	115	0	12	0	0	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	115	0	0	252	0	0	347	345	126	219	367	115
Stage 1	-	-	-	-	-	-	230	230	-	115	115	-
Stage 2	-	-	-	-	-	-	117	115	-	104	252	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1473	-	-	1312	-	-	595	577	901	728	561	937
Stage 1	-	-	-	-	-	-	753	713	-	889	800	-
Stage 2	-	-	-	-	-	-	887	800	-	891	698	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1473	-	-	1312	-	-	592	577	901	728	561	937
Mov Cap-2 Maneuver	-	-	-	-	-	-	592	577	-	728	561	-
Stage 1	-	-	-	-	-	-	753	713	-	889	800	-
Stage 2	-	-	-	-	-	-	883	800	-	891	698	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.2	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	592	1473	-	-	1312	-	-	937
HCM Lane V/C Ratio	0.02	-	-	-	-	-	-	0.005
HCM Control Delay (s)	11.2	0	-	-	0	-	-	8.9
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	14	92	0	21	169
Future Vol, veh/h	0	14	92	0	21	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	100	0	23	184

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	330	100	0	0	100	0
Stage 1	100	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	665	956	-	-	1493	-
Stage 1	924	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	655	956	-	-	1493	-
Mov Cap-2 Maneuver	655	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	796	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	956	1493	-
HCM Lane V/C Ratio	-	-	0.016	0.015	-
HCM Control Delay (s)	-	-	8.8	7.4	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

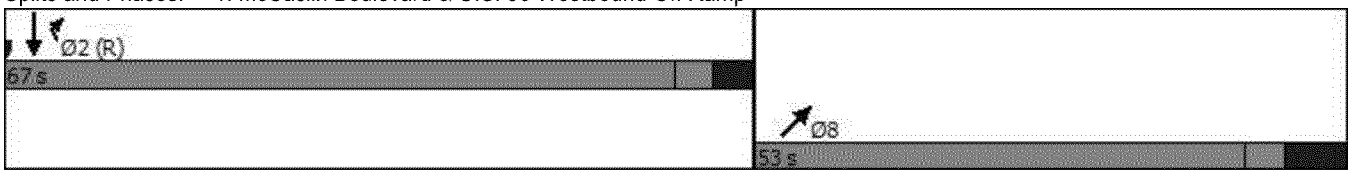
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	2087	669	1502
Future Volume (vph)	2087	669	1502
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	2268	727	1633
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	67.0	67.0	53.0
Total Split (%)	55.8%	55.8%	44.2%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	60.5	60.5	43.0
Actuated g/C Ratio	0.50	0.50	0.36
v/c Ratio	0.88	0.39	0.90
Control Delay	32.1	17.7	27.4
Queue Delay	0.0	0.0	0.0
Total Delay	32.1	17.7	27.4
LOS	C	B	C
Approach Delay	32.1		27.4
Approach LOS	C		C
Queue Length 50th (ft)	564	137	164
Queue Length 95th (ft)	640	176	275
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2563	1847	1851
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.88	0.39	0.88

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 28.2	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	79.1

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	2087	557	0
Future Vol, veh/h	0	0	0	2087	557	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	2268	605	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	907	-
Stage 1	-	-	0	-
Stage 2	-	-	907	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 346	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 320	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 346	-
Mov Cap-2 Maneuver	-	-	~ 346	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 320	-

Approach	SB	SW
HCM Control Delay, s	0	$ 375.6
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	346
HCM Lane V/C Ratio	-	1.75
HCM Control Delay (s)	-	$ 375.6
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	38.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



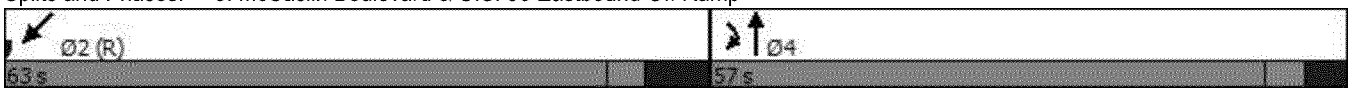
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1647	865	1739
Future Volume (vph)	1647	865	1739
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1790	940	1890
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	57.0	57.0	63.0
Total Split (%)	47.5%	47.5%	52.5%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	49.5	49.5	53.7
Actuated g/C Ratio	0.41	0.41	0.45
v/c Ratio	0.85	0.62	0.83
Control Delay	37.0	28.1	25.4
Queue Delay	0.0	0.0	0.0
Total Delay	37.0	28.1	25.4
LOS	D	C	C
Approach Delay	37.0		25.4
Approach LOS	D		C
Queue Length 50th (ft)	453	233	238
Queue Length 95th (ft)	520	290	297
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2097	1522	2275
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.85	0.62	0.83

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 30.4	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	36.7

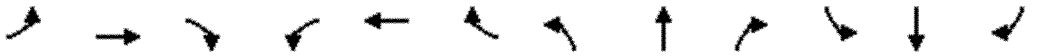
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1647	0	0	495	0
Future Vol, veh/h	0	1647	0	0	495	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1790	0	0	538	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	716	-
Stage 1	-	-	0	-
Stage 2	-	-	716	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 430	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 405	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 430	-
Mov Cap-2 Maneuver	-	-	~ 430	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 405	-

Approach	NB	NE
HCM Control Delay, s	0	158.8
HCM LOS		F

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	430	-
HCM Lane V/C Ratio	1.251	-
HCM Control Delay (s)	158.8	-
HCM Lane LOS	F	-
HCM 95th %tile Q(veh)	22.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	548	62	561	58	35	268	382	941	82	166	1283	909
Future Volume (vph)	548	62	561	58	35	268	382	941	82	166	1283	909
Satd. Flow (prot)	3221	1637	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.966		0.950			0.095			0.196		
Satd. Flow (perm)	3221	1637	1583	1770	1863	1583	343	5085	1583	365	5085	1583
Satd. Flow (RTOR)			389			189			127			452
Lane Group Flow (vph)	441	222	610	63	38	291	415	1023	89	180	1395	988
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	27.2	27.2	27.2	14.0	14.0	14.0	61.5	47.8	47.8	61.4	47.6	120.0
Actuated g/C Ratio	0.23	0.23	0.23	0.12	0.12	0.12	0.51	0.40	0.40	0.51	0.40	1.00
v/c Ratio	0.60	0.60	0.93	0.31	0.18	0.83	0.85	0.50	0.13	0.55	0.69	0.62
Control Delay	45.2	48.6	37.2	49.8	46.4	37.4	43.6	30.5	2.2	22.5	33.7	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	48.6	37.2	49.8	46.4	37.4	43.6	30.5	2.2	22.5	33.7	1.9
LOS	D	D	D	D	D	D	D	C	A	C	C	A
Approach Delay		42.0			40.3			32.4			20.6	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	156	157	174	45	27	77	114	239	0	77	352	0
Queue Length 95th (ft)	230	267	#436	84	57	171	#224	301	16	122	411	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	773	393	675	324	341	444	488	2027	707	384	2018	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.56	0.90	0.19	0.11	0.66	0.85	0.50	0.13	0.47	0.69	0.62

Intersection Summary

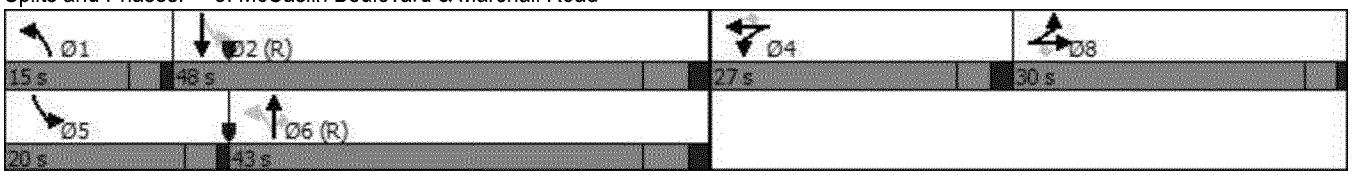
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 29.8	Intersection LOS: C
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	38	423	1088	1837
Demand Flow Rate, veh/h	39	431	1110	1874
Vehicles Circulating, veh/h	1971	1028	314	119
Vehicles Exiting, veh/h	22	396	1696	1026
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	17.0	2.4	10.0	15.1
Approach LOS	C	A	A	C

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	314	4.645	4.328	4.645	4.328
Entry Flow, veh/h	39	117	1938	522	588	881	993
Cap Entry Lane, veh/h	266	593	0.980	1011	1087	1210	1283
Entry HV Adj Factor	0.973	0.982	308	0.980	0.981	0.980	0.981
Flow Entry, veh/h	38	115	1900	512	577	863	974
Cap Entry, veh/h	259	582	0.162	991	1067	1186	1259
V/C Ratio	0.147	0.197	0.0	0.516	0.541	0.728	0.774
Control Delay, s/veh	17.0	8.7	A	10.0	10.0	14.3	15.7
LOS	C	A	1	B	A	B	C
95th %tile Queue, veh	1	1		3	3	7	8

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	126	26	0	291	1	38	2	5	0	0	10
Future Vol, veh/h	9	126	26	0	291	1	38	2	5	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	137	28	0	316	1	41	2	5	0	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	317	0	0	165	0	0	493	488	83	407	502	317
Stage 1	-	-	-	-	-	-	171	171	-	317	317	-
Stage 2	-	-	-	-	-	-	322	317	-	90	185	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1241	-	-	1412	-	-	472	479	960	541	471	723
Stage 1	-	-	-	-	-	-	815	757	-	693	654	-
Stage 2	-	-	-	-	-	-	689	654	-	908	746	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1241	-	-	1412	-	-	462	475	960	532	467	723
Mov Cap-2 Maneuver	-	-	-	-	-	-	462	475	-	532	467	-
Stage 1	-	-	-	-	-	-	808	750	-	687	654	-
Stage 2	-	-	-	-	-	-	679	654	-	892	739	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	13.1	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	491	1241	-	-	1412	-	-	723
HCM Lane V/C Ratio	0.1	0.008	-	-	-	-	-	0.015
HCM Control Delay (s)	13.1	7.9	0	-	0	-	-	10.1
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	17	275	0	20	111
Future Vol, veh/h	0	17	275	0	20	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	299	0	22	121

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	464	299	0	0	299	0
Stage 1	299	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	556	741	-	-	1262	-
Stage 1	752	-	-	-	-	-
Stage 2	864	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	547	741	-	-	1262	-
Mov Cap-2 Maneuver	547	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	849	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	1.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	741	1262	-
HCM Lane V/C Ratio	-	-	0.025	0.017	-
HCM Control Delay (s)	-	-	10	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

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Project No. 23-1-644

November 1, 2023

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APPENDIX F..... QUALIFICATIONS OF THE ENVIRONMENTAL PROFESSIONAL

EXECUTIVE SUMMARY

A summary of the findings of the Phase I Environmental Site Assessment of the approximate 1.97-acre parcel located at 3 South Marshall Road in Superior, Boulder County, Colorado, the subject property, is provided below. Details of the assessment of the subject property have not been included or fully developed in this summary, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

FINDING	IDENTIFIED	NOT IDENTIFIED
Recognized Environmental Condition	☐	☒
Controlled Recognized Environmental Condition	☐	☒
Historical Recognized Environmental Condition	☐	☒
Significant Data Gaps	☒	☐
De minimis conditions	☐	☒

A completed user questionnaire and owner interview was not provided. The lack of historical information regarding the subject property uses is considered a significant data gap.

1.0 INTRODUCTION

This report presents the results of the Phase I Environmental Site Assessment (ESA) conducted by Kumar & Associates, Inc. (K+A) for the purpose of identifying recognized environmental conditions in connection with the approximate 1.97-acre parcel located at 3 South Marshall Road in Superior, Boulder County, Colorado, (including buildings and other fixtures and improvements located on the subject property at the time of the reconnaissance) referred to as the "subject property". A site vicinity diagram is included in the attachments as Figure 2, and references to documentation used to prepare this report are included in the applicable sections. Qualifications of the Environmental Professional are presented in Appendix F.

1.1 Scope of Services

This Phase I ESA was performed in accordance with our proposal and consistent with the procedures included in ASTM E1527-13 and E1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and United States Environmental Protection Agency *All Appropriate Inquiries Final Rule* 40 CFR Part 312. The purpose of the assessment is to identify recognized environmental conditions in connection with the subject property and to satisfy one of the requirements to qualify for the innocent landowner defense to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability. ASTM E1527-21 defines the following terms as:

Recognized Environmental Condition (REC)

> "(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release into the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."

Controlled Recognized Environmental Condition (CREC)

> "recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."

Historical Recognized Environmental Condition (HREC)

> "a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations)."

De Minimis Condition

> "a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

This purpose was undertaken through user-provided information, regulatory database review, historical records review, interviews, including local government inquiries, as applicable, and a visual non-invasive reconnaissance of the subject property and adjoining properties. The nature and/or movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface at the subject property was not evaluated by obtaining samples and conducting laboratory analysis. It is possible that a sampling and analysis program or excavation of soil could change the conclusions presented in this report. Limitations, ASTM deviations, and significant data gaps (if identified) are evident from reviewing the applicable scope of services and the report text.

ASTM E1527-21 defines "migrate/migration" as "the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface." This report includes an evaluation of vapor migration in connection with the subject property.

1.2 Limitations, ASTM Deviations, and Significant Data Gaps

Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested is not, or was not, received by the issuance date of the report. Consideration of such information is beyond the scope of this assessment. Information obtained for this Phase I ESA was received from several sources that are believed to be reliable; nonetheless, the authenticity or reliability of these sources cannot be and is not warranted hereunder. This Phase I ESA was further limited by the following:

- A completed user questionnaire and owner interview was not provided. The lack of historical information regarding the subject property uses is considered a significant data gap.

An evaluation of the significance of limitations and missing information with respect to our findings has been conducted, and where appropriate, significant data gaps are identified and discussed in the text of the report. However, it should be recognized that an evaluation of significant data gaps is based on the information available at the time of report issuance, and an evaluation of information received after the report issuance date may result in an alteration of our findings, conclusions, or opinions. We have no obligation to provide information obtained or discovered by us after the issuance date of the report, or to perform any additional services, regardless of whether the information would affect any conclusions, recommendations, or opinions in the report. This disclaimer specifically applies to any information that has not been provided by the client.

This report represents K+A's service to the client as of the report date and constitutes our final document; its text may not be altered after final issuance. Findings in this report are based on current utilization of the subject property, information derived from the reconnaissance, and from other activities described herein; such information is subject to change. Certain indicators of the presence of hazardous substances or petroleum products may have been latent, inaccessible, unobservable, or not present during the reconnaissance and may subsequently become observable (such as after site renovation or development). Furthermore, these services are not to be construed as legal interpretation or advice.

1.3 Reliance

This Phase I ESA report was prepared for the exclusive use and reliance of the client, KT Development, which is a "user" of the ESA as defined by ASTM. Use or reliance by any other party is prohibited without the written authorization of KT Development and K+A.

Reliance on the Phase I ESA by the client and all authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, Phase I ESA report, and K+A's agreement for services. The limitation of liability defined in the agreement for services is the aggregate limit of K+A's liability to the client and all relying parties.

The continued viability of this report is subject to Sections 4.6 and 4.8 of ASTM E1527-21. If the Phase I ESA will be relied on by a user (third party) different than the one(s) for whom the Phase I ESA was originally prepared, the third party must also satisfy the user's responsibilities in Section 6 of ASTM E1527-21.

1.4 User Responsibilities and Provided Information

The following information was requested from Entitlement and Engineering Solutions representative Mary Kasal, the user of this ESA.

1.4.1 User's Specialized Knowledge or Experience

Specialized knowledge of RECs in connection with the site was requested from the client. This information has not been received as of the issuance date of the report, and unless notified otherwise, we assume the client is evaluating this information outside the context of this report.

1.4.2 User's Actual Knowledge of Environmental Liens or Activity and Use Limitations

Actual knowledge of any environmental liens or AULs encumbering the site or in connection with the site was requested from the client. This information has not been received as of the issuance date of the report, and unless notified otherwise, we assume the client is evaluating this information outside the context of this report.

1.4.3 Valuation Reduction for Environmental Issues

Knowledge of any property value reduction for environmental issues in connection with the site was requested from the client. This information has not been received as of the issuance date of the report, and unless notified otherwise, we assume the client is evaluating this information outside the context of this report.

1.4.4 Commonly Known or Reasonably Ascertainable Information

Commonly known or reasonably ascertainable information concerning RECs in connection with the site was requested from the client. This information has not been received as of the issuance date of the report, and unless notified otherwise, we assume the client is evaluating this information outside the context of this report.

1.4.5 Obvious Indicators of Contamination

Information concerning obvious indicators of contamination in connection with the site was requested from the client. This information has not been received as of the issuance date of the report, and unless notified otherwise, we assume the client is evaluating this information outside the context of this report.

1.4.6 Reason for Performing the Phase I ESA

Information concerning the reasons for performing the Phase I ESA was requested from the client. It is assumed that the user wishes to qualify for a landowner liability protection (LLP) to CERCLA liability and to understand potential environmental conditions that could materially impact the operation of a facility associated with the subject property.

2.0 PHYSICAL SETTING

K+A reviewed the current United States Geological Survey (USGS) 7.5-minute topographic map and other reasonably ascertainable physical setting sources to obtain information concerning the

geologic, hydrogeologic, hydrologic, and topographic characteristic of the subject property. An excerpt of the topographic map reviewed as a source of the subject property's physical setting is included as Figure 1.

Physical Setting

Physical Setting		Source
Site Address(s) or Location	3 South Marshall Road, Superior, Boulder County, Colorado 80301	User Provided
Parcel Identification Number (s)	1157519242002	Boulder County Assessor's Records
Land Area	Approximately 1.97 acres	
Latitude / Longitude	39.955455, -105.162171 (approximate center)	Google Maps
Topography		
Elevation	Approximately 5,470 feet above mean sea level – National Geodetic Vertical Datum	USGS Topographic Map, Louisville, Colorado Quadrangle Published 1965 Photorevised 1994
Gradient	Sloping to the southeast	
Closest Surface Water	Coal Creek is located on the south adjoining property	
Hydrogeology		
Aquifer Description	Area of Unconsolidated Alluvial Deposits	Depth to the Water Table (1976-1977) in the Boulder-Fort Collins-Greeley Area, Front Range Urban Corridor, Colorado 1979
Estimated Depth to Groundwater	Depth to water table is 5 to 10 feet below land surface.	
Hydrogeologic Gradient	Mimics the surface topographic gradient to the southeast. However, groundwater flow direction is influenced by factors such as underground structures, seasonal fluctuations, and soil and bedrock properties. Intrusive measurement of groundwater flow is outside the scope of this Phase I ESA.	

3.0 SUBJECT PROPERTY RECONNAISSANCE

The purpose of the site reconnaissance is to collect information and make observations to help identify recognized environmental conditions in connection with the subject property. This section of the report summarizes physically observed characteristics of the subject property identified during the reconnaissance. The subject property and accessible interior areas of structures, if any, located on the subject property were visually observed to the extent not obstructed by bodies of water, adjacent buildings, pavement, or other obstacles. A site and vicinity diagram is included as Appendix A – Figure 2. Property reconnaissance photographs are provided in Appendix C.

3.1 Subject Property Occupants and Operations

The subject property consists of approximately 1.97 acres of undeveloped land defined by Marshall Road and adjoining properties. Geotechnical soil borings were observed along the western border of the property during the site reconnaissance.

General Subject Property Improvements

Reconnaissance Details	
K+A Personnel	Nancy Otterstrom
Date	October 18, 2023
Site Escort	None
Weather Conditions	Clear, 75° F, calm winds
Improvements	
Number of Structures	None
Potable Water	Not applicable
Sewage Disposal	
Electricity	
Natural Gas / Propane	
Roads	None

3.2 Interior and Exterior Observations

Characteristics observed during the property reconnaissance or reported to K+A by persons knowledgeable of the current conditions of the subject property are indicated with an "**X**" in the following table. Characteristics not observed or reported are indicated with a "**-**". Observed or reported characteristics are discussed following the table.

Subject Property Characteristics

Characteristic	Observed / Reported	*De Minimis* Condition	REC	HREC
Emergency generators	-	-	-	-
Aboveground storage tanks	-	-	-	-
Underground storage tanks	-	-	-	-
Drums, Totes, and Intermediate Bulk Containers	-	-	-	-
Automobile Repair	-	-	-	-
PCB-Containing Items	-	-	-	-
Drains and sumps	-	-	-	-
Water/Wastewater	-	-	-	-
Trash, debris, or other waste materials	-	-	-	-
Strong, pungent, or noxious odors	-	-	-	-
Other processes or equipment	-	-	-	-
Unidentified substance containers	-	-	-	-
Hazardous substances and petroleum products in connection with identified uses	-	-	-	-

Subject Property Characteristics

Characteristic	Observed / Reported	*De Minimis* Condition	REC	HREC
Hazardous substances and petroleum products not in connection with identified uses	-	-	-	-
Elevators	-	-	-	-
Air compressors	-	-	-	-
Hydraulic lifts	-	-	-	-
Dry cleaning	-	-	-	-
Photo processing	-	-	-	-
Laboratory hoods or incinerators	-	-	-	-
Floor drains	-	-	-	-
Stains or Corrosion on floors, walls, or ceiling (except water staining)	-	-	-	-
Septic systems or cesspools	-	-	-	-
Oil/water separators	-	-	-	-
Pipeline markers	-	-	-	-
Stained soil or pavement	-	-	-	-
Stressed vegetation	-	-	-	-
Construction/demolition debris or dumped fill dirt	-	-	-	-
Other dumping or disposal areas	-	-	-	-
Surface water discoloration, odor, sheen, or free-floating product	-	-	-	-
Pools or sumps containing liquids likely to contain hazardous substances or petroleum products	-	-	-	-
Surface water containing liquids likely to contain hazardous substances or petroleum products	-	-	-	-
Pits, ponds, or lagoons	-	-	-	-
Quarries or pits	-	-	-	-
Wells	-	-	-	-

3.3 Subject Property Reconnaissance Summary

The current characteristics observed during the reconnaissance are not considered recognized environmental conditions in connection with the subject property.

4.0 ADJOINING PROPERTIES

The area surrounding the subject property generally consists of a walking trail and Coal Creek, commercial properties and US Highway 36. Adjoining properties are summarized in the following table.

Adjoining Properties

Direction	Identified Use	Address
Northwest ↖	Utility building and paved parking lot	100 Superior Plaza Way
North ↑		
Northeast ↗	Walking path, followed by a drainage culvert and US Highway 36	Not applicable
East →		
Southeast ↘		
South ↓	Coal Creek Trail followed by Coal Creek	Not applicable
Southwest ↙		
West ←	Paved parking lot surrounding a vacant lot	1 South Marshall Road

The current adjoining land uses are not considered recognized environmental conditions in connection with the subject property.

5.0 HISTORICAL RESEARCH

The objective of compiling and analyzing historical property information and developing a history of the previous uses of the subject property, adjoining properties, and surrounding area is to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the subject property.

5.1 Historical Sources

K+A reviewed reasonably ascertainable historical sources with the objective of identifying obvious uses of the subject property and adjoining properties from the present back to the subject property's first developed use, or back to 1940, whichever was earlier. Standard historical sources include: topographic maps; aerial photographs; local street directories; fire insurance maps; property tax files; land title records; building department records, interviews; and zoning/land use records. Data failure may occur if standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and all obvious uses of the subject property have not been identified at five-year intervals back to first use or 1940, whichever is earlier. If data failure represents a significant data gap, its impact on the ability of the Environmental Professional to identify recognized environmental conditions will be discussed in Section 5.2 – *Historical Use Summary*.

5.1.1 USGS Topographic Maps

USGS topographic maps were reviewed to identify the likelihood of past uses having led to recognized environmental conditions in connection with the subject property.

- Louisville, Colorado: published 1942 from **1938-1939** survey (1:31,680)
- Louisville, Colorado: published 1942 from 1938-1939 survey, revised 1950 from **1950** survey (1:24,000)
- Louisville, Colorado: published 1957 from **1954-1955** aerials (1:24,000)
- Louisville, Colorado: published 1965 from **1964** aerials (1:24,000)
- Louisville, Colorado: published 1965 from 1964 aerials, revised 1971 from **1971** aerials (1:24,000)
- Louisville, Colorado: published 1965 from 1964 aerials, revised 1979 from **1978** aerials (1:24,000)
- Louisville, Colorado: published 1965 from 1964 aerials, revised 1994 from **1988-1990** aerials (1:24,000)

Historical USGS Topographic Maps

Direction	Identified Use
Subject ⊕	Undeveloped land (1938-1939, 1950, 1954-1955, 1964, 1971, 1978, and 1988-1990)
Northwest ↖	Undeveloped land (1938-1939, 1950, 1954-1955, 1964, 1971, 1978, and 1988-1990)
North \	
Northeast ↗	Undeveloped land (1938-1939 and 1950)
East →	Developed with the Denver Boulder Turnpike (1954-1955 and 1964)
Southeast ↘	Developed with US Highway 36 (1971, 1978, and 1988-1990)
South \	Undeveloped land, followed by Coal Creek (1938-1939, 1950, 1954-1955, 1964, 1971, 1978, and 1988-1990)
Southwest ↙	
West ←	Undeveloped land (1938-1939, 1950, 1954-1955, 1964, 1971, 1978, and 1988-1990)

5.1.2 Aerial Photographs

Reasonably ascertainable historical aerial photographs obtained from Environmental Risk information Services (ERIS) (originally sourced by the USGS, Agricultural Stabilization and Conservation Service [ASCS], Army Mapping Services [AMS], the United States Department of Agriculture [USDA], the National Aeronautics and Space Administration [NASA], and Maxar Technologies [Maxar]) were reviewed at approximate 5 to 10-year intervals to identify the likelihood of past uses having led to recognized environmental conditions in connection with the subject property. Evaluation of the photographs may be limited by sufficient resolution to allow identification of development and activities of areas encompassing the subject property. The source and date of each photograph and a summary of the review are included in this section.

- ASCS: 1937 and 1941
- AMS: 1953

- USGS: 1963, 1971, 1978, 1983, 1988, and 1999
- NASA: 1992
- USDA: 2004, 2005, 2006, 2009, 2011, 2013, 2015, 2017, 2019, and 2021
- Maxar: 2023

Historical Aerial Photographs

Direction	Identified Use
Subject ⊕	Undeveloped and/or agricultural land (1937, 1941, 1953, 1963, 1971, 1978, 1983, 1988, 1992, 1999, 2004, 2005, 2006, 2009, 2011, and 2013) Appears graded and utilized for vehicle parking for adjoining construction activities (2015) Undeveloped/graded land (2017, 2019, 2021, and 2023)
Northwest ↖	Undeveloped and/or agricultural land with a dirt path leading to the east (1937 and 1941) Undeveloped and/or agricultural land (1953, 1963, 1971, and 1978) Appears graded for development (1983, 1988, and 1992)
North \	Appears developed with the current utility building, followed by graded land (1999) Appears developed with its current configuration, a utility building and paved parking for a multi-tenant commercial building further west (2004, 2005, 2006, 2009, 2011, 2013, 2015, 2017, 2019, 2021, and 2023)
Northeast ↗	Developed with a dirt path and one small structure on the north, followed by undeveloped and/or agricultural land (1937 and 1941)
East →	Developed with a multi-lane highway (1953, 1963, 1971, 1978, 1983, 1988, 1992, 1999, 2004, 2005, 2006, 2009, 2011, and 2013) Appears graded for highway improvements, with a small structure on the southern portion of the property (2015)
Southeast ↘	Appears developed with its current configuration, a walking trail, followed by a drainage culvert and US Highway 36 (2017, 2019, 2021, and 2023)
South \	Undeveloped land, followed by Coal Creek (1937, 1941, 1953, 1963, 1971, 1978, 1983, 1988, 1992, and 1999)
Southwest ↙	Appears developed with a walking trail, followed by Coal Creek (2004, 2005, 2006, 2009, 2011, 2013, 2015, 2017, 2019, 2021, and 2023)
West ←	Undeveloped and/or agricultural land (1937, 1941, 1953, 1963, 1971, 1978, 1983, 1988, 1992, and 1999) Appears developed with a commercial structure on the north, followed by undeveloped land (2004, 2005, 2006, 2009, 2011, and 2013) Appears developed with a commercial structure on the north, followed by a gravel parking lot on the south (2015) Appears undeveloped (2017) Appears developed with a commercial structure surrounded by paved parking (2019 and 2021) Appears developed with paved parking surrounding a vacant lot (2023)

5.1.3 Local Street Directories

Historical street directories, published by various companies and provided by Environmental Risk Information Services, were reviewed. Selected years were reviewed at approximate five-year intervals, if the information is practically reviewable from the street directory source.

Historical Street Directories

Direction	Identified Use
Subject ⌖	**3 South Marshall Road** No listing (1970-71, 1975, 1980, 1985, 1989-90, 1996, 2000, 2003, 2008, 2012, 2016, 2020, and 2022)
Northwest ↖	**100 Superior Plaza Way** No listing (1970-71, 1975, 1980, 1985, 1989-90, and 1996) Superior Liquor Market (2000, 2003, and 2008) Softbank Venture Capital (2003, 2008, and 2012) Old Chicago (2003, 2008, 2012, 2016, 2020, and 2022) Old Chicago-Superior (2008) Veripost Inc (2008) Newmerix Corp (2008 and 2012) Npulse Software Inc (2008 and 2012) Super Joe Specialty Coffee (2008 and 2012) Lawrence Kelly Md (2012) Latis Networks Inc (2012 and 2016) Still Secure (2012, 2016, 2020, and 2022) Superior Liquor (2012, 2016, 2020, and 2022) ATM (2016) Edward Jones (2016, 2020, and 2022) Pro Skate (2016, 2020, and 2022) Return Path Inc (2020 and 2022)
North ↑	
Northeast ↗	**No address identified**
East →	
Southeast ↘	
South ↓	**No address identified**
Southwest ↙	
West ←	**1 South Marshall Road** No listing (1970-71, 1975, 1980, 1985, 1989-90, 1996, 2000, 2003, 2008, 2012, 2016, and 2022) Element Boulder Superior (2020)

5.1.4 Fire Insurance Maps

Collections of historical fire insurance maps produced by the Sanborn Map Company were searched to identify the likelihood of past uses having led to recognized environmental conditions in connection with the subject property. Map coverage for the subject property was not available.

5.1.5 Property Tax Files

Based on a review of information obtained from Boulder County Assessor's records, the subject property is currently owned by RC Superior, LLC.

5.1.6 Land Title Records

K+A was not contracted to obtain a chain of title for the subject property and was not provided one by the user. Therefore, review of recorded land title records was not included as part of the scope of services for this Phase I ESA.

5.1.7 Building Department Records

Records obtained from the Boulder County Assessor were reviewed for information concerning improvements to the subject property and adjoining properties.

Building Department Records

Direction	Current Building Description	Year Built	Use / Notes
Subject ⊕	None	N/A	Not provided
Northwest ↖	Utility building and parking lot	~1999	Merchandising Improvements
North \			
Northeast ↗	None	N/A	Not available
East →			
Southeast ↘			
South \	None	N/A	Not available
Southwest ↙			
West ←	None	N/A	Not provided

5.1.8 Interviews

A historical interview was requested from the current site owner. As of the issuance of this report, a response has not been received.

5.2 Historical Use Summary

The following summary is based on a review of historical information.

- Subject Property – undeveloped land since at least 1937. Grading was observed in 2015, during which the subject property was utilized as vehicle parking for adjoining construction activities. By 2017, these activities had ceased and the property appeared as undeveloped land.
- Northwest / North – undeveloped land from at least 1937 until approximately 1983, when grading/ground disturbance of the property was observed. The current utility building appeared complete by 1999, with the paved parking lot completed by 2004. The paved lot is associated with a multi-tenant commercial structure located further west. Tenants of the property have included various consultants, retailers, medical offices, and restaurants.

- Northeast / East / Southeast – Developed with one small structure as early as 1937, with the remainder of the property undeveloped. The structure remained through at least 1941. By 1953, the Denver Boulder Turnpike was constructed, which was later renamed US Highway 36. In 2015, widening and improvements to the highway were observed, which appear complete by 2017.
- South / Southwest – undeveloped land followed by Coal Creek since at least 1937. The current walking trail was complete by 2004.
- West – undeveloped land from at least 1937 until approximately 2004, when a commercial structure was built on the northern portion of the property. The structure remained through at least 2015. City directories did not indicate the tenant of the property during this time. The land was razed in 2017, and by 2019, a new structure surrounded by paved parking has been constructed. The structure remained through at least 2021; however, it is currently a vacant lot. The paved parking lot surrounding the former structure remains through present day. The former tenant of the property was Element Boulder Superior.

Recognized environmental conditions in connection with the subject property were not identified through review of historical information.

6.0 ENVIRONMENTAL REGULATORY RECORDS

Environmental Risk Information Services (ERIS) provided primary regulatory database information. If supplemental information was obtained from others sources, those sources will be described in the text of the following sections. The information described in this report is subject to the accuracy of the data provided by ERIS and other sources, which depends significantly on the date at which time the information was updated by applicable regulatory agencies. Because of the inability of the database provider to geographically locate properties due to inadequate addresses, information concerning facilities identified in the orphan summary of the database report may not be practically reviewable.

When used to describe a listed facility's location, the terms upgradient, cross-gradient, and downgradient refer to the topographic gradient of the listed facility in relation to the subject property. It is generally assumed that groundwater mimics the surface topographic gradient. However, groundwater flow direction is influenced by factors such as underground structures, seasonal fluctuations, and soil and bedrock properties.

K+A completed the regulatory records review on October 18, 2023.

6.1 Federal, State, and Tribal Databases

Facility listings identified on federal, state, or tribal databases within the ASTM-specified approximate minimum search distances are listed below. Database descriptions, sources, regulatory agency information, and reporting frequency are included in the database report presented in Appendix D.

Standard Environmental Record Sources

Database	Description	Search Distance* (miles)	Number of Listings
Federal			
NPL	National Priority List – The United States Environmental Protection Agency list of hazardous waste sites eligible for long-term remedial action financed under the federal Superfund program. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation.	1.0	0
Delisted NPL	Sites deleted from the NPL based on criteria established by the National Oil and Hazardous Substances Pollution Contingency Plan	0.5	0
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System – US EPA list of potentially hazardous waste sites that are either on, proposed to, or being assessed for inclusion on the NPL	0.5	0
CERCLIS NFRAP	CERCLA sites that have been assessed with no further remedial action planned and determined not to be a potential NPL site	0.5	0
SEMS	The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.	0.5	0
SEMS Archive	SEMS Archived site Inventory displays site and location information at sites archived from SEMS, which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.	0.5	0
RCRA CORRACTS	Resource Conservation and Recovery Act – US EPA list of hazardous waste handlers with RCRA corrective action activity	1.0	1
RCRA TSD	Sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA	0.5	0
RCRA Generators	Generators are listed as either large (LQG – generate ≥1,000 kg/month of non-acutely hazardous waste or ≥1 kg/month of acutely hazardous waste), small (SQG – generate 100-1,000 kg/month of non-acutely hazardous waste), or conditionally exempt (CESQG – generate <100 kg/month of non-acutely hazardous waste or <1 kg/month of acutely hazardous waste).	subject property and adjoining properties	0

Standard Environmental Record Sources

Database	Description	Search Distance* (miles)	Number of Listings
IC / EC	Institutional controls or engineering controls – US EPA list of sites with various forms of IC (e.g. groundwater use, construction, deed, or property use restrictions, post remediation care requirements) or EC (e.g. caps, building foundations, liners, or treatment methods to create pathway elimination for regulated substances to enter environmental media) in place	subject property only	0
ERNS	Emergency Response Notification System – National Response Center list of reported releases of oil and hazardous substances	subject property only	0
State and/or Tribal			
NPL	State-equivalent and/or tribal-equivalent list of NPL sites	1.0	0
CERCLIS	State-equivalent and/or tribal-equivalent list of CERCLIS sites	0.5	0
SWF / LF	Solid waste facilities and landfills – Colorado Department of Public Health and Environment (CDPHE) and/or tribal list of disposal sites, which may include active or inactive facilities or open dumps that failed to meet RCRA Subtitle D criteria	0.5	1
LST	Leaking storage tank – Colorado Department of Labor and Employment (CDLE) Division of Oil and Public Safety (OPS) and/or tribal list of leaking underground storage tank (LUST) or leaking aboveground storage tank (LAST) sites	0.5	3
RST	Regulated storage tank – OPS and/or tribal list of regulated underground storage tank (UST) or aboveground storage tank (AST) sites	subject property and adjoining properties	0
IC / EC	CDPHE and/or tribal-equivalent list of IC / EC sites	subject property only	0
VCP	Voluntary Cleanup Program – CDPHE and/or tribal-equivalent list of sites in programs that encourage voluntary cleanup and determine cleanup responsibilities in planning the reuse of property	0.5	0
Brownfields	US EPA list of sites addressed by Cooperative Agreement Recipients or Targeted Brownfields Assessments	0.5	0

* – Approximate minimum search distance measured from the nearest site boundary

In addition to the previously described ASTM-specified standard environmental record sources and search distances, K+A reviewed other federal, state/tribal, local, and proprietary databases. A list of the additional reviewed databases is included in the database report presented in Appendix D.

Information presented in the database report and/or otherwise obtained by K+A for select listings are included in the following table.

Facility Listings

Name and Location	Estimated Distance / Direction / Gradient	Database Listing	REC	HREC	CREC
Element by Westin /Element Boulder Superior 1 South Marshall Road	West adjoining / cross-gradient	FINDS/FRS / ALT FUELS / PDES	-	-	-
Westbound Highway 36 Just East of Superior	East adjoining / cross-gradient	SPILLS	-	-	-

Element by Westin /Element Boulder Superior

The western adjoining property was identified as a Facility Registry Service/Facility Index (FINDS/FRS), Alternative Fuels (ALT FUELS), and Pollution Discharge Elimination System (PDES) site in the regulatory database report. Both the FINDS/FRS and PDES regulatory listings are related to a terminated water discharge permit for construction activities. No complaints or violations have been reported on the EPA's Enforcement and Compliance History Online (ECHO) database. The ALT FUELS listing is related to an electric charging station at the hotel, which was listed as temporarily unavailable. An anticipated open date for the charging station was not listed in the database, and a vacant lot was observed on the property during the site reconnaissance. Based on its regulatory status, the facility listings are not considered recognized environmental conditions in connection with the subject property.

Westbound Highway 36 Just East of Superior

The eastern adjoining property was identified as a Spills (SPILLS) site in the regulatory database report. According to the database report, a spill of cesium 137, americium, and beryllium occurred on August 10, 1998, when an RTD bus missed construction cones in the area and struck a survey density meter, impacting the land surface. No impacts to air, surface or groundwater were noted in the report, and the meter was transported back to the subcontractor facility for repair. No evacuation or cleanup activities were noted in the report. Based on the date of the release and lack of clean-up activities noted, the database listing is not considered a recognized environmental condition in connection with the subject property.

Remaining Database Listings

Based on regulatory status, distance, and topographic location, the remaining facility listings are not considered recognized environmental conditions in connection with the subject property.

6.1.1 Vapor Encroachment Screening

A vapor encroachment screening was conducted to evaluate the presence or likely presence of vapors from contaminants of concern (COCs) in the vadose zone of the subject property caused by the release of vapors from contaminated soil and/or groundwater either on or near the subject property.

Based on information obtained from the Phase I ESA, known or suspected contaminated properties were not identified within one third of a mile or one tenth of a mile for petroleum hydrocarbon COCs, the default areas of concern. As such, a vapor encroachment condition was not identified for the subject property.

6.2 Interviews with State and/or Local Government Officials

To enhance and supplement the previously described standard environmental record sources, local and/or additional state/tribal records were reviewed when such additional records are reasonably ascertainable, sufficiently useful, accurate, and complete.

6.2.1 Colorado Department of Public Health and Environment

The Colorado Department of Public Health and Environment (CDPHE) was contacted regarding environmental records that would help identify the likelihood of conditions contributing to recognized environmental conditions in connection with the subject property. Ms. Pearl Campos stated that they did not have records for the subject property.

6.2.2 Local Health Department

The Boulder County Health Department was contacted regarding environmental records that would help identify the likelihood of conditions contributing to recognized environmental conditions in connection with the subject property. At the issuance of this report, a reply from the department had not been received. If information is received that is material to a revision of the findings of this report, an addendum will be issued.

6.2.3 Fire Department

Mountain View Fire Protection District (MVFPD) was contacted regarding environmental records that would help identify the likelihood of conditions contributing to recognized environmental conditions in connection with the subject property. At the issuance of this report, a reply from the department had not been received. If information is received that is material to a revision of the findings of this report, an addendum will be issued.

6.2.3 Colorado Oil and Gas Conservation Commission

The Colorado Oil and Gas Conservation Commission (COGCC) online database was searched for the presence of oil and gas wells on or adjoining the subject property. According to the COGCC records, no oil and gas wells were identified on or within 500 feet of the subject property.

6.3 Regulatory Records Summary

The review of environmental records identified five (5) regulatory listings within the ASTM-specified approximate minimum search distances. Based on regulatory status, distance, and/or topographic location, the facility listings are not considered recognized environmental conditions in connection with the subject property.

7.0 FINDINGS AND OPINIONS

Kumar & Associates, Inc. has performed a Phase I Environmental Site Assessment consistent with the procedures included in United States Environmental Protection Agency, *All Appropriate Inquiries Final Rule*, 40 CFR Part 312 and ASTM E1527-13 and E1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* The Phase I ESA was conducted under the supervision or responsible charge of Nancy Otterstrom, Environmental Professional.

A summary of the findings of the Phase I ESA is provided below. Details of the assessment of the subject property have not been included or fully developed in this summary, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

- The purpose of the assessment was to identify recognized environmental conditions in connection with the approximate 1.97-acre parcel located at 3 South Marshall Road in Superior, Boulder County, Colorado, (including buildings and other fixtures and improvements located on the site at the time of the reconnaissance) referred to as the "subject property".
- The subject property consists of approximately 1.97 acres of undeveloped land defined by Marshall Road and adjoining properties.
- The current characteristics observed during the reconnaissance are not considered recognized environmental conditions in connection with the subject property.
- The subject property is bordered by the following adjoining properties:
  - Northwest / North – utility building and paved parking
  - Northeast / East / Southeast – US Highway 36
  - South / Southwest – Coal Creek Trail followed by Coal Creek
  - West – a paved parking lot surrounding vacant land

  The current adjoining land uses are not considered recognized environmental conditions in connection with the subject property.
- The following summary is based on a review of historical information.
  - Subject Property – undeveloped land since at least 1937. Grading was observed in 2015, during which the subject property was utilized as vehicle parking for adjoining construction activities. By 2017, these activities had ceased and the property appeared as undeveloped land.
  - Northwest / North – undeveloped land from at least 1937 until approximately 1983, when grading/ground disturbance of the property was observed. The current utility building appeared complete by 1999, with the paved parking lot completed by 2004. The paved lot is associated with a multi-tenant commercial structure located further west. Tenants of the property have included various consultants, retailers, medical offices, and restaurants.

- Northeast / East / Southeast – Developed with one small structure as early as 1937, with the remainder of the property undeveloped. The structure remained through at least 1941. By 1953, the Denver Boulder Turnpike was constructed, which was later renamed US Highway 36. In 2015, widening and improvements to the highway were observed, which appear complete by 2017.
- South / Southwest – undeveloped land followed by Coal Creek since at least 1937. The current walking trail was complete by 2004.
- West – undeveloped land from at least 1937 until approximately 2004, when a commercial structure was built on the northern portion of the property. The structure remained through at least 2015. City directories did not indicate the tenant of the property during this time. The land was razed in 2017, and by 2019, a new structure surrounded by paved parking has been constructed. The structure remained through at least 2021; however, it is currently a vacant lot. The paved parking lot surrounding the former structure remains through present day. The former tenant of the property was Element Boulder Superior.

Recognized environmental conditions in connection with the subject property were not identified through review of historical information.

- The review of environmental records identified five (5) regulatory listings within the ASTM-specified approximate minimum search distances. Based on regulatory status, distance, and/or topographic location, the facility listings are not considered recognized environmental conditions in connection with the subject property.

8.0 CONCLUSIONS

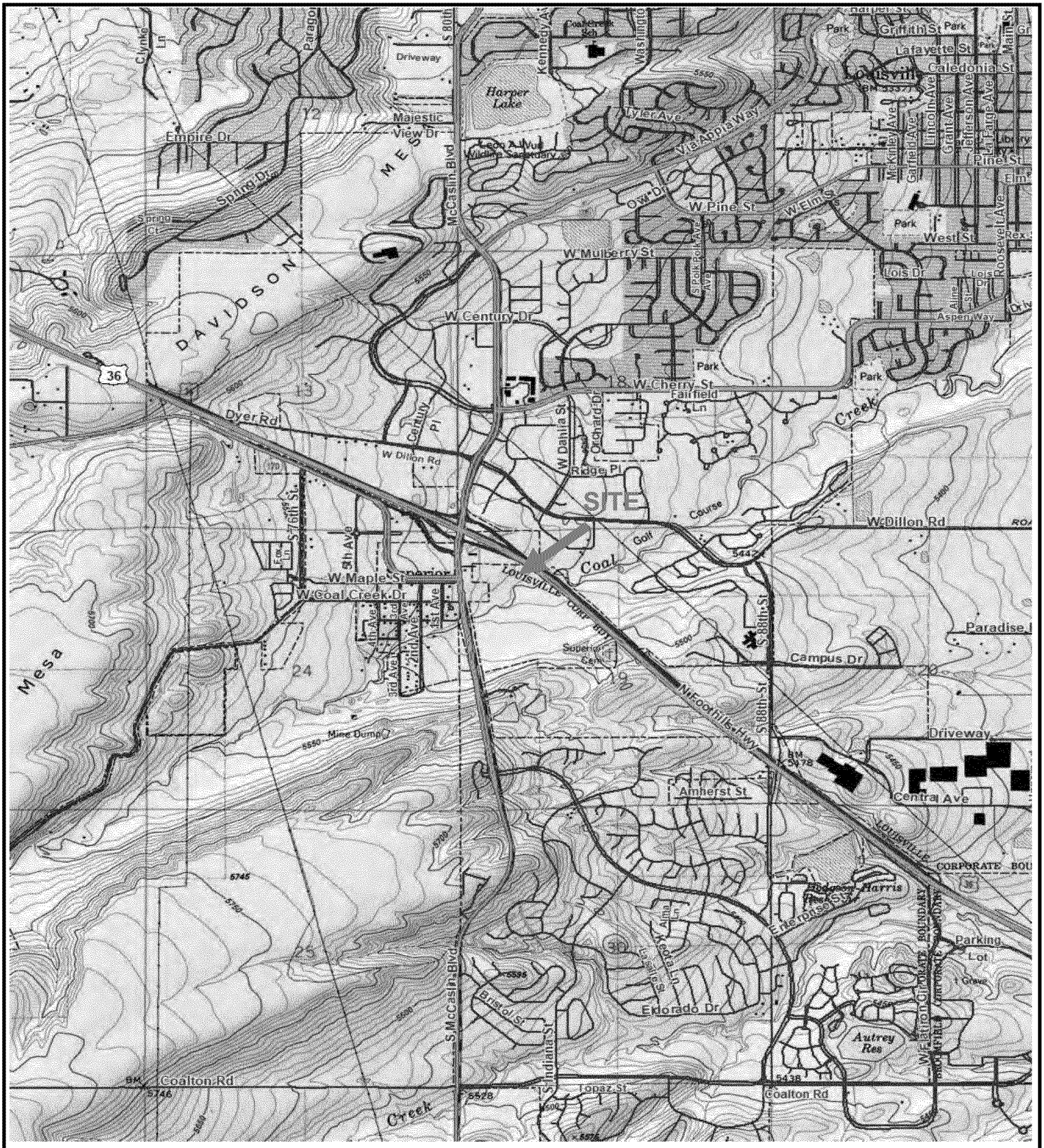
We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-13 and E1527-21 of the approximate 1.97-acre parcel located at 3 South Marshall Road, in Superior, Boulder County, Colorado, the subject property. Any exceptions to, or deletions from, this practice are described in Section 1.0 of this report. This assessment has revealed no recognized environmental conditions, controlled recognized environmental conditions, or historical recognized environmental conditions in connection with the subject property.

A completed user questionnaire and owner interview was not provided. The lack of historical information regarding the subject property uses is considered a significant data gap.

9.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

I, Nancy Otterstrom, declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312, and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

APPENDIX A
FIGURES


SITE
Louisville
Superior
DAVIDSON MESA
Harper Lake
Mine Dump
Coal Creek
Creek
W Dillon Rd
W Cherry St
W Pine St
W Elm St
W Mulberry St
W Century Dr
Dyer Rd
Coalton Rd
Campus Dr
Amherst St
Central Ave
Eldorado Dr
Bristol St
Topaz St
Autrey Res
Parking Lot
Driveway
Park
Golf Course
Fairfield Ln
Ridge Pl
Aspen Way
Lois Dr
Tyler Ave
Via Appia Way
Empire Dr
Majestic View Dr
Spring Dr
W Maple St
W Coal Creek Dr
Louisville Cemetery
Paradise
CORPORATE BOUNDARY
Kennedy Ave
Washington Ave
Griffith St
Lafayette St
Caledonia St
Pine St
Elm St
West St
Lois Dr
Aspen Way
Fairfield Ln
Ridge Pl
Orchard Dr
Century Pl
W Dillon Rd
W Maple St
W Coal Creek Dr
Campus Dr
Amherst St
Central Ave
Eldorado Dr
Bristol St
Topaz St
Coalton Rd
Parking Lot
Autrey Res
Harper Lake
Mine Dump



Approximate Site Boundary

Source:
Google Earth (Google)

Image Date: **May 4, 2023**

Scale: **1" ≈ 200'**

The base aerial photograph depicts conditions at the time the image was recorded; which may differ from conditions at the time of the site reconnaissance.

1.97-Acre Parcel
3 Marshall Road, Superior, Boulder County, Colorado

Appendix A - Figure 2

Kumar & Associates Project No. 23-1-644

Site and Vicinity Diagram

APPENDIX B
HISTORICAL DOCUMENTATION

HISTORICAL AERIALS

Project Property: 1.97-Acres
Marshall Road and Coal Creek
Superior CO 80027

Project No: 23-1-644

Requested By: Kumar & Associates, Inc.

Order No: 23100400478

Date Completed: October 06,2023

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Date	Source	Scale	Comments
2023	MAXAR TECHNOLOGIES	1" = 500'	
2021	United States Department of Agriculture	1" = 500'	
2019	United States Department of Agriculture	1" = 500'	
2017	United States Department of Agriculture	1" = 500'	
2015	United States Department of Agriculture	1" = 500'	
2013	United States Department of Agriculture	1" = 500'	
2011	United States Department of Agriculture	1" = 500'	
2009	United States Department of Agriculture	1" = 500'	
2006	United States Department of Agriculture	1" = 500'	
2005	United States Department of Agriculture	1" = 500'	
2004	United States Department of Agriculture	1" = 500'	
1999	United States Geological Survey	1" = 500'	
1992	National Aeronautics And Space Admin	1" = 500'	
1988	United States Geological Survey	1" = 500'	
1983	United States Geological Survey	1" = 500'	
1978	United States Geological Survey	1" = 500'	
1971	United States Geological Survey	1" = 500'	
1963	United States Geological Survey	1" = 500'	
1953	Army Mapping Service	1" = 500'	
1941	Agricultural Stabilization & Conserv. Service	1" = 500'	
1937	Agricultural Stabilization & Conserv. Service	1" = 500'	



Year: 2023
Source: MAXAR
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2021
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2019
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2017
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS

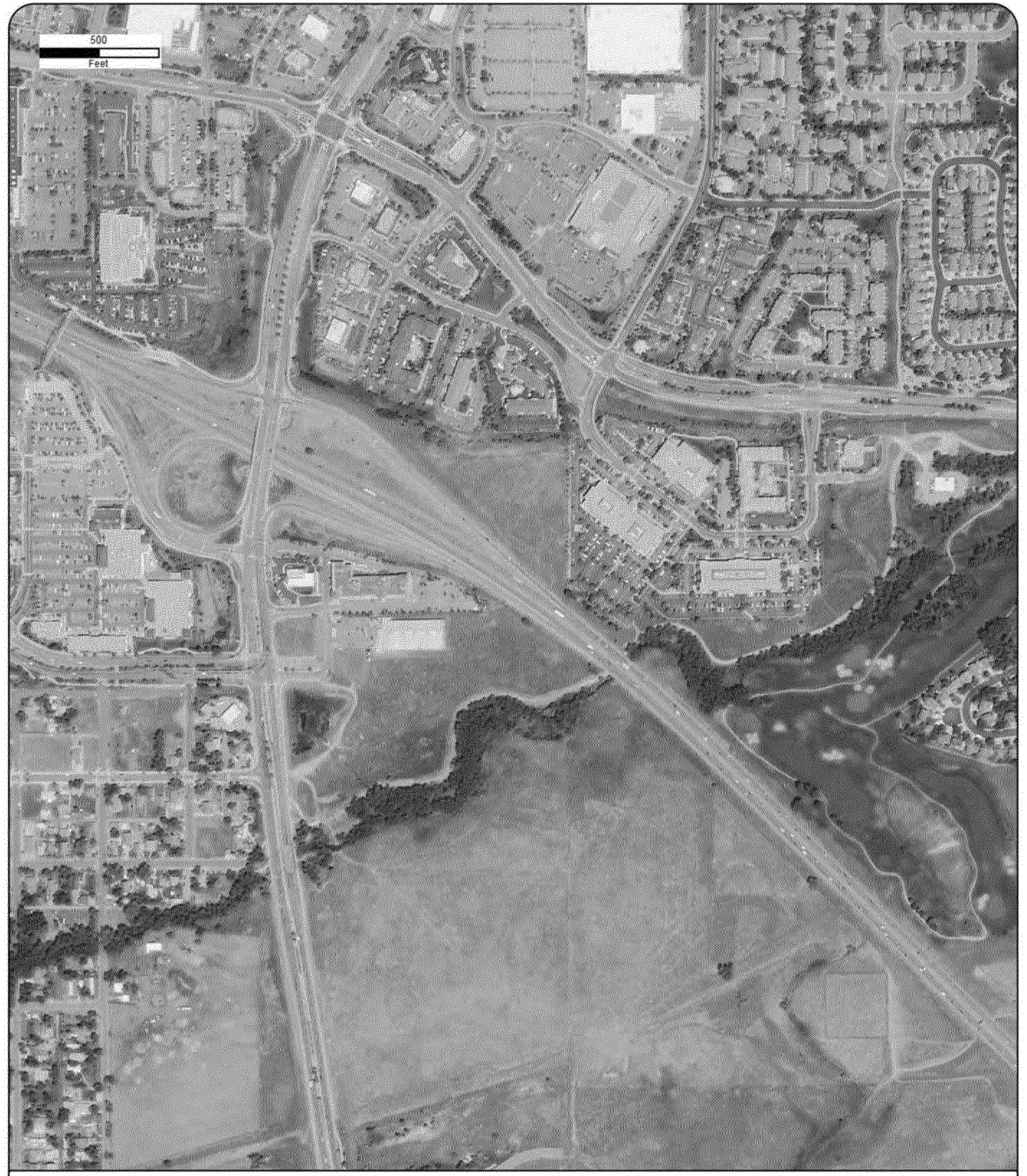


Year: 2015
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2013
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2011
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS

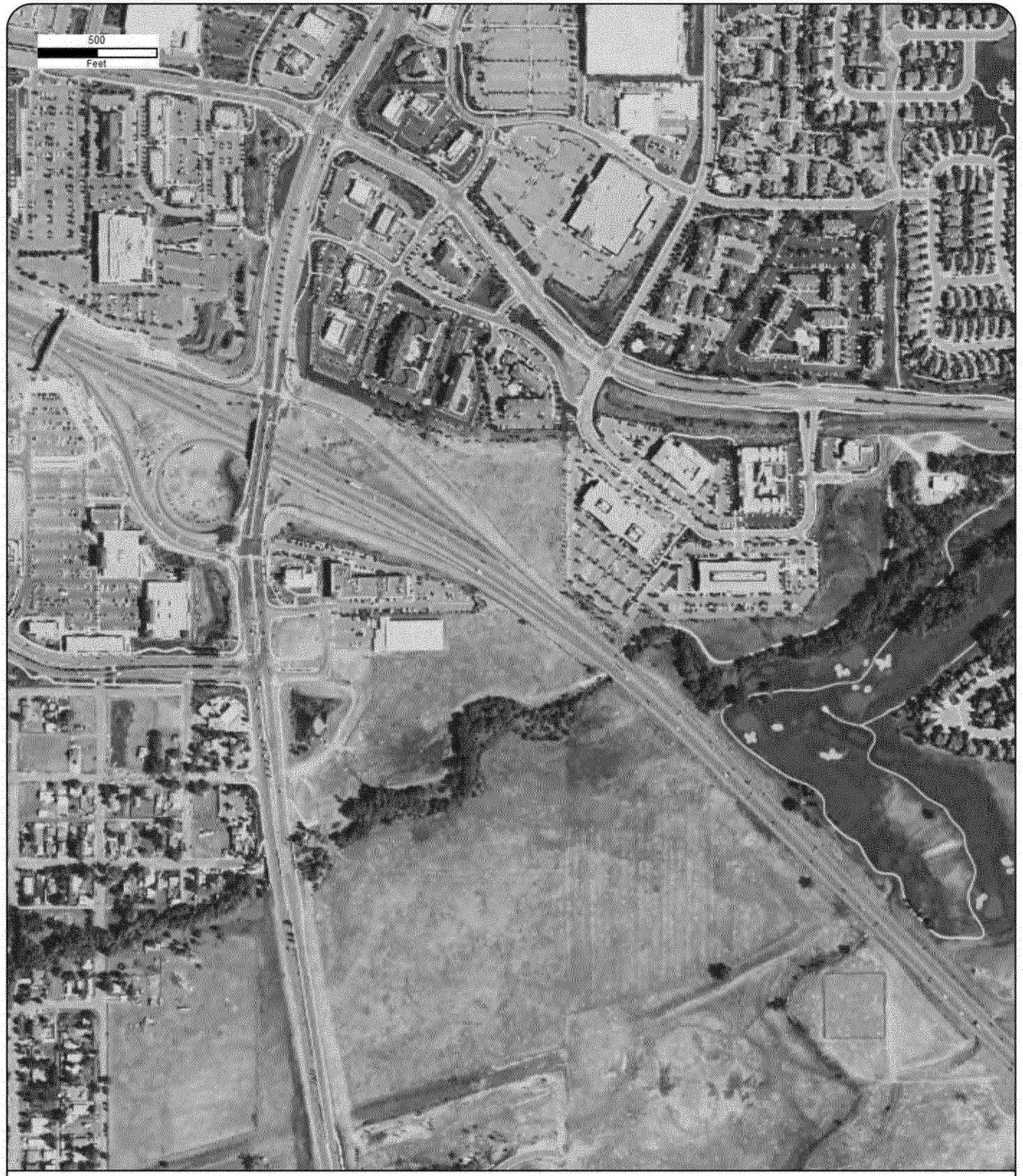


Year: 2009
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2006
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2005
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2004
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1999
Source: USGS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1992
Source: NASA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1988
Source: USGS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1983
Source: USGS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1978
Source: USGS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1971
Source: USGS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1963
Source: USGS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS

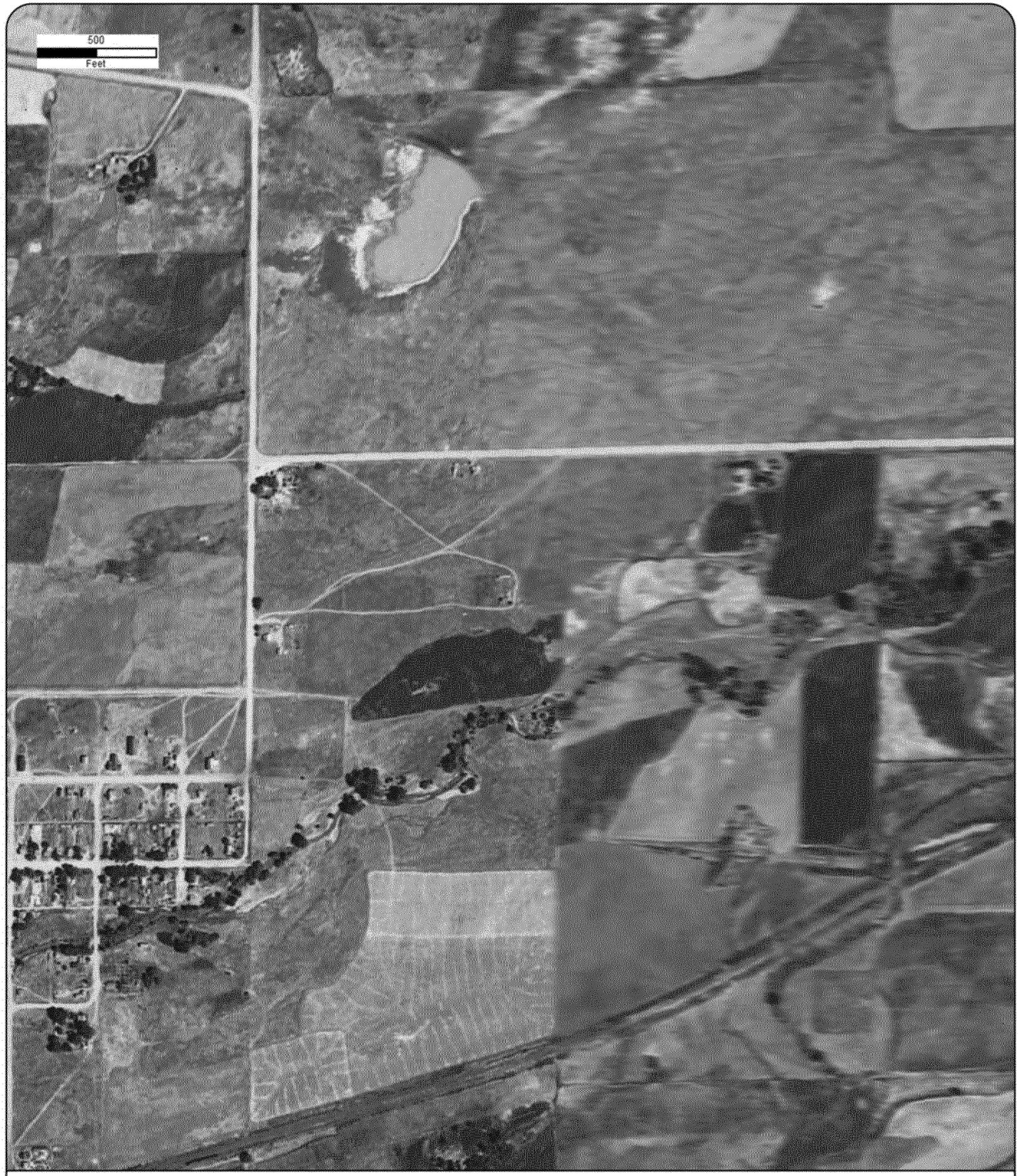


Year: 1953
Source: AMS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1941
Source: ASCS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1937
Source: ASCS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS

APPENDIX C
PROPERTY RECONNAISSANCE PHOTOGRAPHS



View of typical site conditions. View to the east.



View of typical site conditions. View to the southeast.



View of a geotechnical boring near the northwest corner of the property. View to the east.



View of typical site conditions. View to the southwest.



View of typical site conditions. View to the northwest.



View of northwesterly adjoining paved parking lot. View to the northwest.



View of northerly adjoining utility building. View to the north.



View of the northeasterly, easterly, and southeasterly adjoining walking trail, followed by a drainage culvert and US Highway 36. View to the northeast.



View of the northeasterly, easterly, and southeasterly adjoining walking trail, followed by a drainage culvert and US Highway 36. View to the southeast.



View of the southerly and southwesterly adjoining Coal Creek Trail, followed by Coal Creek. View to the southeast.



View of westerly adjoining vacant lot surrounded by paved parking. View to the northwest.



View along the northern border of the subject site, shared with paved parking lot and a utility building. View to the east.



View along the eastern border of the subject site, shared with walking trail, followed by a drainage culvert and US Highway 36. View to the south.



View along the southern border of the subject site, shared with Coal Creek Trail, followed by Coal Creek. View to the west.



View along the western border of the subject site, shared with vacant lot surrounded by paved parking. View to the north.

APPENDIX D
REGULATORY DATABASE INFORMATION

DATABASE REPORT

Project Property:	*1.97-Acres* *Marshall Road and Coal Creek* *Superior CO 80027*
Project No:	*23-1-644*
Report Type:	*Database Report*
Order No:	*23100400478*
Requested by:	*Kumar & Associates, Inc.*
Date Completed:	*October 5, 2023*

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Executive Summary

Property Information:

Project Property:		*1.97-Acres* *Marshall Road and Coal Creek Superior CO 80027*
Project No:		*23-1-644*
Coordinates:		
	Latitude:	*39.95544221*
	Longitude:	*-105.1621161*
	UTM Northing:	*4,422,824.34*
	UTM Easting:	*486,152.83*
	UTM Zone:	*UTM Zone 13S*
Elevation:		*5,467 FT*

Order Information:

Order No:	*23100400478*
Date Requested:	*October 4, 2023*
Requested by:	*Kumar & Associates, Inc.*
Report Type:	*Database Report*

Historicals/Products:

Aerial Photographs	*Historical Aerials (with Project Boundaries)*
City Directory Search	*CD - 2 Street Search*
ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*
Fire Insurance Maps	*US Fire Insurance Maps*
Physical Setting Report (PSR)	*Physical Setting Report (PSR)*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	**1**	**1**
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	0	0	-	-	0
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
DOE FUSRAP	Y	1	0	0	0	0	0	0
State								
LANDFILL METHANE	Y	0.5	0	0	0	0	-	0
COVENANTS	Y	0.5	0	0	0	0	-	0
SUPERFUND NRD	Y	1	0	0	0	0	0	0
SHWS	Y	1	0	0	0	0	0	0
DELISTED SHWS	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	**1**	0	-	**1**
HIST LF	Y	0.5	0	0	0	0	-	0
HIST LANDFILLS	Y	0.5	0	0	0	0	-	0
RECYCLING	Y	0.5	0	0	0	0	-	0
LST	Y	0.5	0	0	**1**	**2**	-	**3**
LUST TRUST	Y	0.5	0	0	0	**1**	-	**1**
DELISTED LST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	**1**	-	-	**1**
AST	Y	0.25	0	0	0	-	-	0
TANKS	Y	0.25	0	0	0	-	-	0
DTNK	Y	0.25	0	0	0	-	-	0
AUL	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	0	0	-	0
BROWNFIELDS	Y	0.5	0	0	0	0	-	0
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0
County	***No County databases were selected to be included in the search.***							

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Additional Environmental Records								
Federal								
FINDS/FRS	Y	PO	0	**1**	-	-	-	**1**
TRIS	Y	PO	0	-	-	-	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
ERNS PFAS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	**1**	0	**1**
LM SITES	Y	1	0	0	0	0	0	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
ALT FUELS	Y	0.25	0	**3**	**6**	-	-	**9**
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	-	-	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0
State								
SPILLS	Y	0.125	0	**1**	-	-	-	**1**
OG SPILLS	Y	0.125	0	0	-	-	-	0
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
AIR PERMITS	Y	0.125	0	**1**	-	-	-	**1**
PFAS	Y	0.5	0	0	0	0	-	0
ASBESTOS	Y	0.125	0	0	-	-	-	0
HAZ GEN	Y	0.125	0	0	-	-	-	0
PDES	Y	PO	0	**1**	-	-	-	**1**
HAZ TSD	Y	0.5	0	0	0	0	-	0
HAZ CORRACT	Y	1	0	0	0	0	0	0
UMTRA	Y	0.5	0	0	0	0	-	0
Tribal	***No Tribal additional environmental record sources available for this State.***							
County	***No County additional environmental databases were selected to be included in the search.***							
	Total:		0	**7**	**9**	**4**	**1**	**21**

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	FINDS/FRS	ELEMENT BY WESTIN SUPERIOR CO	1 S MARSHALL RD SUPERIOR CO 80027 ***Registry ID:*** 110070152559	W	0.02 / 92.13	13	20
1	ALT FUELS	Element Boulder Superior	1 S Marshall Rd Superior CO 80027 ***ID:*** 167442	W	0.02 / 92.13	13	20
1	PDES	Element Hotel	1 S Marshall Rd Superior CO 80027	W	0.02 / 92.13	13	21
2	ALT FUELS	TOS SUPERIOR PLAZA	Superior Plaza Way Superior CO 80027 ***ID:*** 224741	WNW	0.06 / 313.57	12	22
3	SPILLS		WB HWY 36 JUST E. OF MCCASLIN BLVD. BOULDER CO ***Case No:*** CO98-262	NW	0.06 / 315.70	12	23
3	AIR PERMITS	CASTLE ROCK CON-G6205	US 36 AT MCCASLIN BLVD MCCASLIN PLANTSITE SUPERIOR AREA CO 80027	NW	0.06 / 315.70	12	24
4	ALT FUELS	Superior, CO - Tesla Supercharger	2 South Marshall Road Superior CO 80027 ***ID:*** 167423	W	0.12 / 619.30	11	31
5	ALT FUELS	CABLELABS EV STATION 4	858 Coal Creek Cir Louisville CO 80027 ***ID:*** 182581	NE	0.13 / 685.53	-7	31
5	ALT FUELS	CABLELABS EV STATION 3	858 Coal Creek Cir Louisville CO 80027 ***ID:*** 182619	NE	0.13 / 685.53	-7	32
5	ALT FUELS	CABLELABS EV STATION 2	858 Coal Creek Cir Louisville CO 80027 ***ID:*** 182618	NE	0.13 / 685.53	-7	33
5	ALT FUELS	CABLELABS EV STATION 1	858 Coal Creek Cir Louisville CO 80027 ***ID:*** 182634	NE	0.13 / 685.53	-7	34
6	UST	My Goods Market #6529	191 S McCaslin Blvd Louisville 80027 CO ***Facility ID:*** 6779 ***Tank Tag | Tank Status:*** 6779-1 | Currently In Use, 6779-2 | Currently In Use	W	0.18 / 972.33	24	34

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
6	LST	My Goods Market #6529	191 S McCaslin Blvd Louisville 80027 CO ***Facility ID:*** 6779 ***Event ID*** **	** ***Status:*** 6007	Closed	W	0.18 / 972.33	24	37
7	ALT FUELS	TOS TOWN HALL1	Park Pl Superior CO 80027 ***ID:*** 87935		WSW	0.21 / 1,090.85	19	38
8	SWF/LF	TOWN OF SUPERIOR PUBLIC WORKS	124 E. Coal Creek Rd. Superior CO 80027		WSW	0.21 / 1,100.37	21	39
8	ALT FUELS	Town of Superior - Town Hall	124 E Coal Creek Dr Superior CO 80027 ***ID:*** 38523		WSW	0.21 / 1,100.37	21	39
9	MRDS	JENKINS	BOULDER COUNTY LOUISVILLE CO 80027 ***Dep ID:*** 10165874		W	0.29 / 1,526.27	33	40
10	LST	CDOT Superior	7979 Marshall Rd Louisville 80027 CO ***Facility ID:*** 7679 ***Event ID*** **	** ***Status:*** 518	Closed	WNW	0.38 / 2,021.23	40	41
10	LUST TRUST	CDOT Superior	7979 Marshall Rd Louisville CO 80027 ***Facility ID*** **|** ***Event ID*** **|** ***Release Date:*** 7679	518	5/12/1992	WNW	0.38 / 2,021.23	40	42
11	LST	My Goods Market #6526	520 S McCaslin Blvd Louisville 80027 CO ***Facility ID:*** 6701 ***Event ID*** **	** ***Status:*** Closed		N	0.48 / 2,510.63	7	42
12	RCRA CORRACTS	CONTINENTAL CLEANERS	305 MCCASLIN BLVD LOUISVILLE CO 80027 ***EPA Handler ID:*** COR000012211		N	0.77 / 4,074.24	6	43

Executive Summary: Summary by Data Source

Standard

Federal

RCRA CORRACTS - RCRA CORRACTS-Corrective Action

A search of the RCRA CORRACTS database, dated Jul 10, 2023 has found that there are 1 RCRA CORRACTS site(s) within approximately 1.00 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
CONTINENTAL CLEANERS	305 MCCASLIN BLVD LOUISVILLE CO 80027 ***EPA Handler ID**: COR000012211*	N	0.77 / 4,074.24	12

State

SWF/LF - Solid Waste Facilities and Landfills

A search of the SWF/LF database, dated May 4, 2023 has found that there are 1 SWF/LF site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
TOWN OF SUPERIOR PUBLIC WORKS	124 E. Coal Creek Rd. Superior CO 80027	WSW	0.21 / 1,100.37	8

LST - Leaking Storage Tanks

A search of the LST database, dated Jun 1, 2023 has found that there are 3 LST site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
My Goods Market #6529	191 S McCaslin Blvd Louisville 80027 CO ***Facility ID**: 6779* ***Event ID**	**Status**: 6007 | Closed*	W	0.18 / 972.33	6
CDOT Superior	7979 Marshall Rd Louisville 80027 CO ***Facility ID**: 7679* ***Event ID**	**Status**: 518 | Closed*	WNW	0.38 / 2,021.23	10
My Goods Market #6526	520 S McCaslin Blvd Louisville 80027 CO ***Facility ID**: 6701* ***Event ID**	**Status**: Closed*	N	0.48 / 2,510.63	11

LUST TRUST - LUST Trust Sites

A search of the LUST TRUST database, dated Jun 1, 2023 has found that there are 1 LUST TRUST site(s) within approximately 0.50

miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
CDOT Superior	7979 Marshall Rd Louisville CO 80027	WNW	0.38 / 2,021.23	10
	Facility ID **|** ***Event ID*** **|** ***Release Date***: *7679 | 518 | 5/12/1992*			

UST - Underground Storage Tanks

A search of the UST database, dated Jun 1, 2023 has found that there are 1 UST site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
My Goods Market #6529	191 S McCaslin Blvd Louisville 80027 CO	W	0.18 / 972.33	6
	Facility ID: *6779* ***Tank Tag*** **|** ***Tank Status***: *6779-1 | Currently In Use, 6779-2 | Currently In Use*			

Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

A search of the FINDS/FRS database, dated Mar 2, 2023 has found that there are 1 FINDS/FRS site(s) within approximately 0.02 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
ELEMENT BY WESTIN SUPERIOR CO	1 S MARSHALL RD SUPERIOR CO 80027	W	0.02 / 92.13	1
	Registry ID: *110070152559*			

MRDS - Mineral Resource Data System

A search of the MRDS database, dated Mar 15, 2016 has found that there are 1 MRDS site(s) within approximately 1.00 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
JENKINS	BOULDER COUNTY LOUISVILLE CO 80027	W	0.29 / 1,526.27	9
	Dep ID: *10165874*			

ALT FUELS - Alternative Fueling Stations

A search of the ALT FUELS database, dated Aug 30, 2023 has found that there are 9 ALT FUELS site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Element Boulder Superior	1 S Marshall Rd Superior CO 80027	W	0.02 / 92.13	1
	ID: *167442*			

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
TOS SUPERIOR PLAZA	Superior Plaza Way Superior CO 80027 ***ID**: 224741*	WNW	0.06 / 313.57	2
Superior, CO - Tesla Supercharger	2 South Marshall Road Superior CO 80027 ***ID**: 167423*	W	0.12 / 619.30	4
TOS TOWN HALL1	Park Pl Superior CO 80027 ***ID**: 87935*	WSW	0.21 / 1,090.85	7
Town of Superior - Town Hall	124 E Coal Creek Dr Superior CO 80027 ***ID**: 38523*	WSW	0.21 / 1,100.37	8

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
CABLELABS EV STATION 3	858 Coal Creek Cir Louisville CO 80027 ***ID**: 182619*	NE	0.13 / 685.53	5
CABLELABS EV STATION 4	858 Coal Creek Cir Louisville CO 80027 ***ID**: 182581*	NE	0.13 / 685.53	5
CABLELABS EV STATION 1	858 Coal Creek Cir Louisville CO 80027 ***ID**: 182634*	NE	0.13 / 685.53	5
CABLELABS EV STATION 2	858 Coal Creek Cir Louisville CO 80027 ***ID**: 182618*	NE	0.13 / 685.53	5

State

SPILLS - Spills

A search of the SPILLS database, dated Apr 8, 2022 has found that there are 1 SPILLS site(s) within approximately 0.12 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	WB HWY 36 JUST E. OF MCCASLIN BLVD. BOULDER CO ***Case No**: CO98-262*	NW	0.06 / 315.70	3

AIR PERMITS - Air Pollution Control Division Permitted Facilities

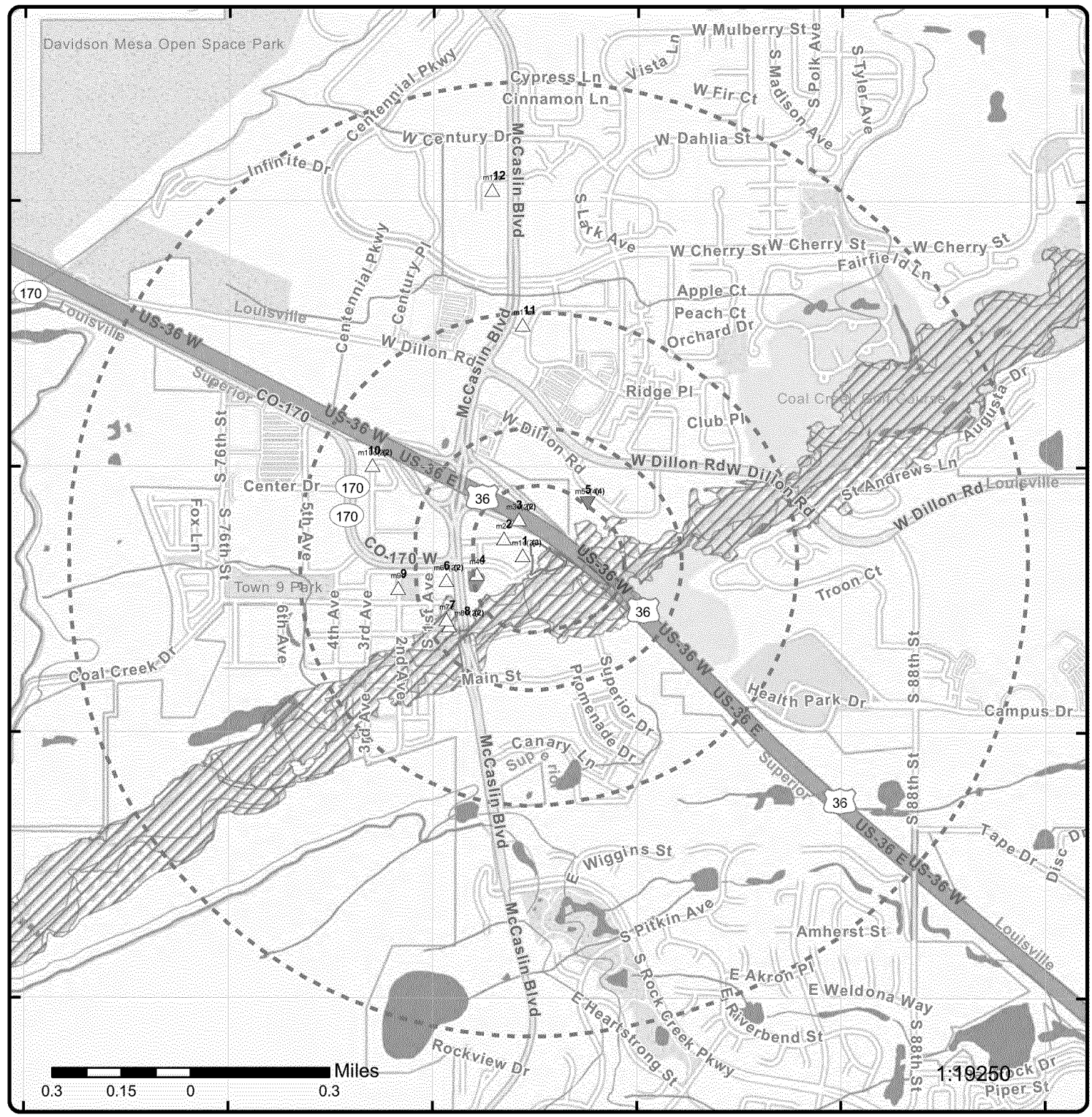
A search of the AIR PERMITS database, dated Feb 13, 2023 has found that there are 1 AIR PERMITS site(s) within approximately 0.12 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
CASTLE ROCK CON- G6205	US 36 AT MCCASLIN BLVD MCCASLIN PLANTSITE SUPERIOR AREA CO 80027	NW	0.06 / 315.70	3

PDES - Permitted Facilities Listing

A search of the PDES database, dated May 1, 2023 has found that there are 1 PDES site(s) within approximately 0.02 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Element Hotel	1 S Marshall Rd Superior CO 80027	W	0.02 / 92.13	1



Map: 1.0 Mile Radius

Order Number: 23100400478

Address: Marshall Road and Coal Creek, Superior, CO

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- Plume
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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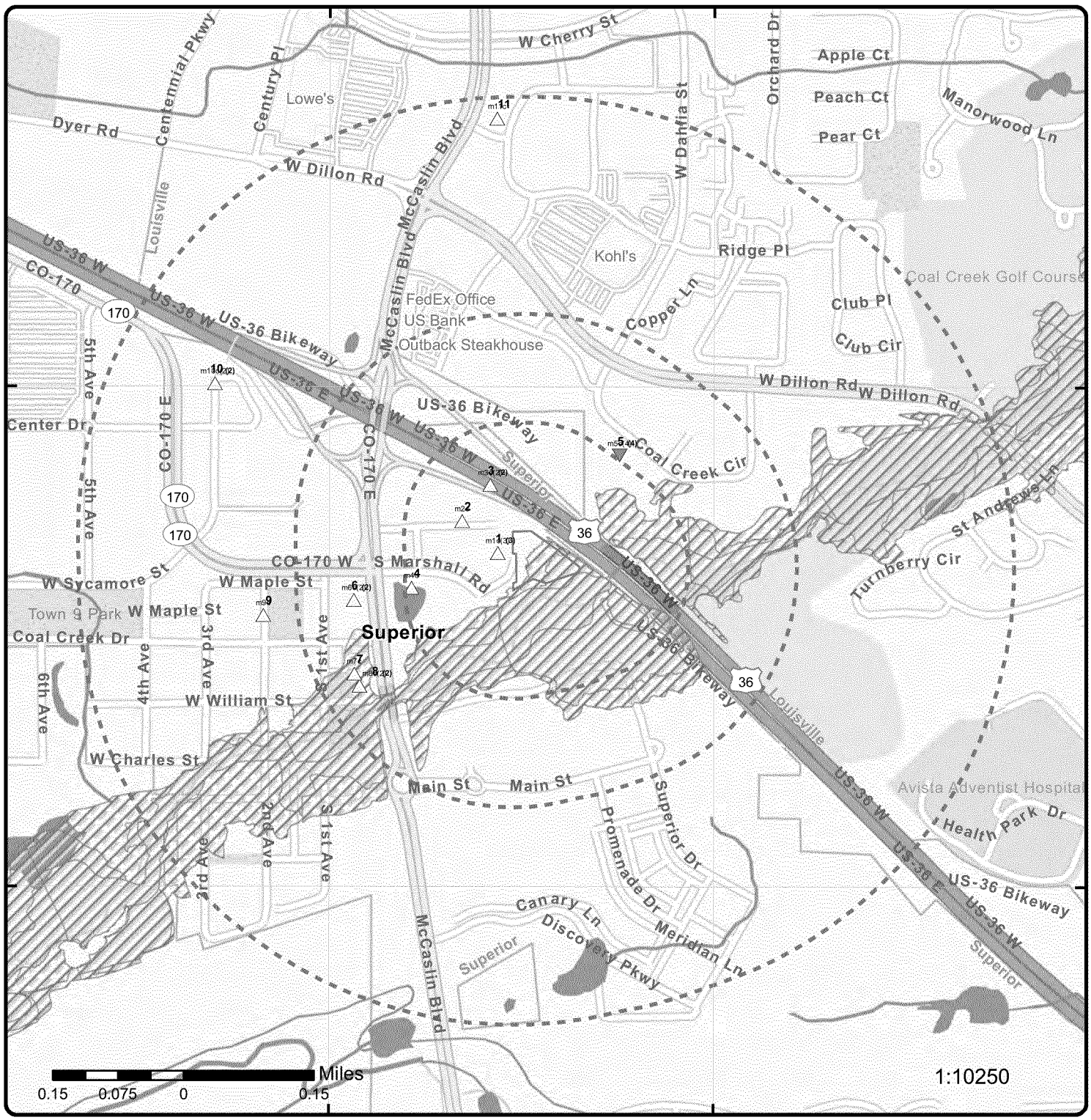

Map: 0.5 Mile Radius

Order Number: 23100400478

Address: Marshall Road and Coal Creek, Superior, CO

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- Plume
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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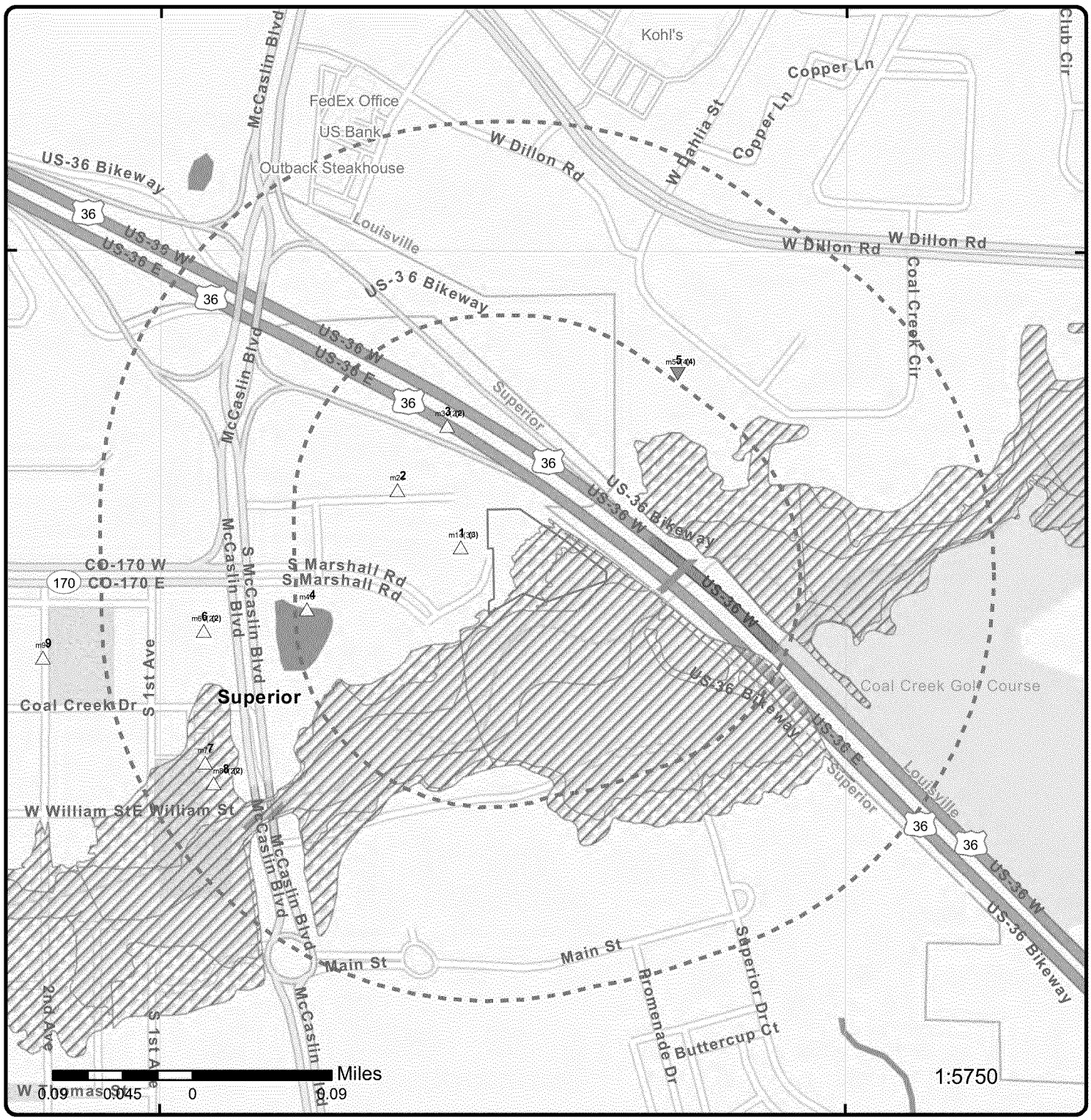

Map: 0.25 Mile Radius

Order Number: 23100400478

Address: Marshall Road and Coal Creek, Superior, CO

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- Plume
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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Aerial **Year: 2023**

Order Number: 23100400478

Address: Marshall Road and Coal Creek, Superior, CO

Source: ESRI World Imagery

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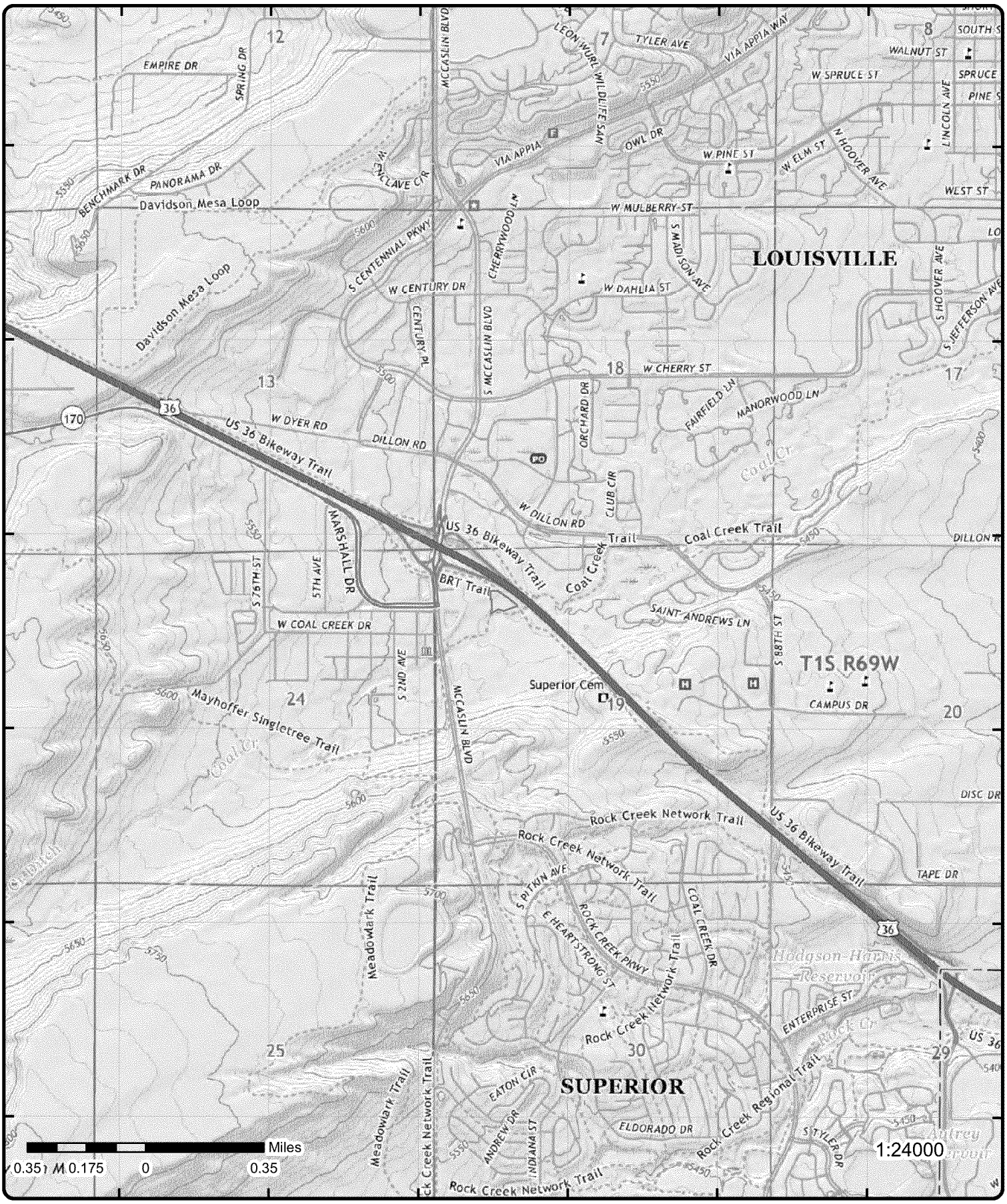

Topographic Map **Year: 2019**

Order Number: 23100400478

Address: Marshall Road and Coal Creek, CO

Quadrangle(s): Lafayette CO, Louisville CO

Source: USGS Topographic Map

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Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 3	W	0.02 / 92.13	5,479.48 / 13	ELEMENT BY WESTIN SUPERIOR CO 1 S MARSHALL RD SUPERIOR CO 80027	FINDS/FRS

Registry ID:	110070152559
FIPS Code:	CO013
HUC Code:	10190005
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	05-JAN-18
Update Date:	
Interest Types:	ICIS-NPDES NON-MAJOR
SIC Codes:	7011
SIC Code Descriptions:	HOTELS AND MOTELS
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	ICIS
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	02
Census Block Code:	080130606002001
EPA Region Code:	08
County Name:	BOULDER
US/Mexico Border Ind:	
Latitude:	39.955673
Longitude:	-105.163398
Reference Point:	CENTER OF A FACILITY OR STATION
Coord Collection Method:	GPS - UNSPECIFIED
Accuracy Value:	
Datum:	NAD83
Source:	
Facility Detail Rprt URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110070152559
Data Source:	Facility Registry Service - Single File
Program Acronyms:	

NPDES:COR03S013, NPDES:COR404533, NPDES:COR416327

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	2 of 3	W	0.02 / 92.13	5,479.48 / 13	Element Boulder Superior 1 S Marshall Rd Superior CO 80027	ALT FUELS

ID:	167442	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	720-750-5757	**CNG Tot Compr Cap:**	
Expected Date:	2023-11-23	**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2020-10-05	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:	HOTEL	**Hydrogen Pressures:**	
Dt Last Confirmed:	2022-12-13	**Hydrogen Standards:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Updated at:	2023-02-14 15:54:11 UTC	**Latitude:**	39.955912
Access Code:	public	**Longitude:**	-105.16309
Access Detail Code:			
Groups with Access Code:	TEMPORARILY UNAVAILABLE (Public)		
Groups with Access Code Fr:	TEMPORAIREMENT SUSPENDU (Public)		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:	LD		
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Temporarily unavailable: The station is temporarily unavailable. See the "Expected Date" field for an anticipated open date.		
Owner Type Desc:	Privately owned		
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	The location is from a real GPS readout at the station.		
Group with Access Desc:	Temporarily unavailable. See the "Expected Date" field for an anticipated open date.(Publicly available to all customers.)		
LPG Primary Desc:			
Intersection Directions:			
Access Days Time:	24 hours daily; for customer use only; see front desk for access		
Restricted Access:	true		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	3 of 3	W	0.02 / 92.13	5,479.48 / 13	**Element Hotel** **1 S Marshall Rd** **Superior CO 80027**	PDES

Permit ID:	COE010031	**SW Constr Activity:**	
Permit Status:	Effective	**SW Constr End Date:**	
Permit Sector:	Public and private utilities	**Permit SIC 1:**	782
Previous Permit ID:		**Permit SIC 2:**	
Regulation ID:		**Permit SIC 3:**	
Facility Name:	Element Hotel	**Permit SIC 4:**	
Facility Address:	1 S Marshall Rd	**Permittee:**	Elemental Hotel
Facility Address 2:		**Former Permittee:**	
Facility City:	Superior	**Activity Desc:**	
Facility State:	CO	**Issue Date:**	5/12/2021
Facility ZIP:	80027	**Effective Date:**	5/12/2021
Facility County:	Boulder	**Expiration Date:**	
Facility Latitude:	39.955287	**Permit Sector1:**	
Facility Longitude:	-105.162483	**Permit Sector2:**	
Facility SIC Code:		**Use category:**	Landscape irrigation-Unrestricted access
Facility Type:		**Termination Date:**	
Water Category:	2	**Issuing Org Type:**	
Immediate Water:		**App Received Date:**	4/20/2021
Receiving Water:		**Ct Status Start Date:**	
Stream Segment:		**Ct Status End Date:**	
Fee Category:	00-00	**Ct Status Reason:**	
Add Fee Category 1:		**Workplan Year:**	
Add Fee Category 2:		**UDF3:**	
Add Fee Category 3:			
General Permit Tye:	COE-Reuse user		
Compliance Tracking Status:			
SW Constr Start Date:			
Reuse Treater:	Superior Metropolitan District No 1		
Facility Class First:			
Facility Description:			
Fac Horizontal Coll. Method:			
Facility ICIS Ownership Type:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Associated Pot W: Superior Metropolitan District No 1
SW Constr Total Acres:
Reuse Treater ID: COE010000
SW Constr Disturb Acres:
Facility Class Second:
Facility Reference Point:
Major Minor: Minor
Major River Basin:
Total App on Average Flow No:
Total App Design Flow No:
Apprvd for Eltrnc Sub:

Facility Contact

Facility Contact Org: Elemental Hotel
Facility Contact First Name: Nick
Facility Contact Last Name: Evans
Facility Contact Title: Mgr
Facility Contact Address: 1 S Marshall Rd
Facility Contact City: Superior
Facility Contact State: CO
Facility Contact ZIP code: 80027
Facility Contact Phone: 720-750-5757
Facility Contact Email: nickolasevans@interstatehotels.com

Legal

Legal First Name: Nick
Legal Last Name: Evans
Legal Title: Mgr
Legal Address: 1 S Marshall Rd
Legal City: Superior
Legal State: CO
Legal ZIP Code: 80027
Legal Phone: 720-750-5757
Legal Email: nickolasevans@interstatehotels.com
Legal Country: USA

2	1 of 1	WNW	0.06 / 313.57	5,478.63 / 12	TOS SUPERIOR PLAZA Superior Plaza Way Superior CO 80027	ALT FUELS

ID: 224741
Fuel Type Code: ELEC: Electric
Station Phone: 888-758-4389
Expected Date:
BD Blends:
NG PSI:
Federal Agency ID:
Open Date: 2022-08-03
Hydrogen is Retail:
Federal Agency:
Facility Type:
Dt Last Confirmed: 2023-08-30
Updated at: 2023-08-30 00:48:14 UTC
Access Code: public
Access Detail Code:
Groups with Access Code: Public
Groups with Access Code Fr: Public
Fed Agency Name:
Hydrogen Status Link:
E85 Other Ethanol Blends:
NPS Unit Name:
Cards Accepted:
CNG Statn Sells Renewable Na:
LNG Statn Sells Renewable Na:

CNG Dispenser No:
CNG Site Renew Src:
CNG Tot Compr Cap:
CNG Storage Cap:
CNG Fill Type Code:
CNG PSI:
CNG Vehicle Class:
LNG Site Renew Src:
LNG Vehicle Class:
LPG Nozzle Types:
Hydrogen Pressures:
Hydrogen Standards:
Latitude: 39.956098
Longitude: -105.163786

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Maximum Vehicle Class:	
RD Blended With Biodiesel:	
RD Blends:	
RD Blends French:	
RD Maximum Biodiesel Level:	
Status:	Open: The station is open.
Owner Type Desc:	
E85 Blender Pump Desc:	
NG Fill Type Desc:	
NG Vehicle Class Desc:	
Geocode Status Desc:	The location is from a real GPS readout at the station.
Group with Access Desc:	Publicly available to all customers.
LPG Primary Desc:	
Intersection Directions:	
Access Days Time:	24 hours daily
Restricted Access:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of 2	NW	0.06 / 315.70	5,478.23 / 12	WB HWY 36 JUST E. OF MCCASLIN BLVD. BOULDER CO	SPILLS

Case No:	CO98-262	**H2O Unit Measure 2:**	
Main ID:		**Quantity 3:**	0
NRC No:		**Unit Measure 3:**	U
Dt of Spl or Rel:	8/10/1998	**H2O quantity 3:**	0
Event Time:	11:32:00 PM	**H2O Unit Measure 3:**	
1st Rep Event Dt:	8/10/1998	**Cause:**	T
Date Reported:	8/11/1998	**Death:**	0
Time Reported:	8:58:00 AM	**Injury:**	0
Date Entered:	8/25/1998	**Evacuation:**	
Time Entered:	11:29:54 AM	**Evacuation No:**	0
Land:	TRUE	**PRP City:**	
Air:	FALSE	**PRP County:**	
Surface Water:	FALSE	**PRP State:**	
Ground Water:	FALSE	**PRP Zip:**	
Material Type:	HAZARDOUS	**PRP Phone:**	-
Quantity 1:	0	**PRP Extension:**	
Unit Measure 1:	U	**Mile Marker:**	
H2O Quantity 1:	0	**Who Took Report:**	JONES, JANET
H2O Unit Measure 1:		**Fixed Facility:**	FALSE
Material 2:	BERYLLIUM	**Event County:**	BOULDER
Quantity 2:	0	**Latitude:**	0
Unit Measure 2:	U	**Longitude:**	0
H2O Quantity 2:	0		

Source Desc:	
Source:	H
Source Type:	COMMERCIAL BUS
Medium:	LAND
Waterway:	
Material 1:	CESIUM 137
Material 3:	AMERICIUM
PRP:	
PRP Contact:	
PRP Street:	
PRP Fax:	
Responder 1:	
Responder 2:	
Responder 3:	
Response Comments:	CDOT & RTD SURVEYED AREA. METER WAS TRANSPORTED BACK TO GROUND ENG (SUB-CONTRACTOR FOR CDOT). BUS IS PARKED @ 1900 31ST ST. GROUND ENG USED A MONITORING INSTRUMENT TO SURVEY THE AREA.
Notified Name:	
Additional Comments:	
Comments:	RTD BUS MISSED CONES IN CONSTRUCTION AREA AND RAN OVER A SURVEY DENSITY METERCONTAINING CESIUM 137,
Cause Info:	BUS RAN OVER SURVEY METER **Note: Many records provided by the department have a truncated [Cause

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Info] field.

Action:

3	2 of 2	NW	0.06 / 315.70	5,478.23 / 12	CASTLE ROCK CON- G6205 US 36 AT MCCASLIN BLVD MCCASLIN PLANTSITE SUPERIOR AREA CO 80027	AIR PERMITS

APCD Site ID:	777-3509	**Sip Status Co:**	FALSE
Site ID:	3509	**Sip Status O3:**	FALSE
Fed Facility ID:	15319811	**Site Cont Company:**	
County:	PORTABLE SOURCE	**Descriptn Category:**	PC
Addr County Name:	BOULDER	**Site First Name:**	RALPH
Address Type:	PORTABLE	**Site Full Name:**	RALPH BELL
Air Program:	B	**Site Last Name:**	BELL
Air Acid Precip:		**Site Title:**	
Class Apen Exempt:		**Site Phone:**	(303)688-6611
Class CFC:		**Site Fax:**	
Class Condensate :		**No Employees:**	0.0
Class Fesop:		**Site Geocode Date:**	10-Dec-2014 15:00:39
Class Mact:		**Pt Lin Are:**	P
Class Neshap:		**Src Scale:**	2
Class Non Fed Rpt:		**Verification:**	
NSPS Federal:		**NAICS Prime:**	212321
Class NSPS State:		**NAICS Second:**	
Class NSR:		**Sic Prime:**	1442
Class PSD:		**Sic Second:**	
Sip Fed Jd:		**Site Operat Stat:**	O
Class Sip Federal:	B	**Owner Cust:**	9920106830
Air Title:		**Method Code:**	I2
Class Tribal:		**Site Lat:**	395728.3226
CMS Category:		**Site Long:**	1050952.1385
CMS Frequency:	0	**UTM Horiz:**	485.951
Cpts Bogus Ind:	FALSE	**UTM Vert:**	4423.093
Govt Fac Classifi:	0	**UTM Zone:**	13.0
Hap Classifi:	NONE	**Vert Dat:**	1
NAA NSR Classifi:	NONE	**Vert Meas:**	1671.16
Op Classification:	NONE	**Vert Meas Acc:**	8.0
Property Area:	0.0	**Vert Meth Coll:**	OT
PSD Classifi:	NONE	**Site Horiz Dat:**	2
City FIPS Code:		**Acc Units:**	METERS
State FIPS:	08	**Accuracy:**	50.0
County FIPS:	777	**Date Coll:**	10-Dec-2014 15:00:39
Addr County FIPS:	013		

Permit App: CASTLE ROCK CON- G6205
SIC Sec Desc:
Site Email:
SIC Pri Desc: MINING AND QUARRYING OF NONMETALLIC MINERALS - Construction Sand and Gravel
Site Description: PORTABLE DIESEL GENERATOR
Site LL Description: Elevation source: National Elevaton Dataset 1/3 Arc Second

Sip Prog1:		**Sip Prog3 Area:**	
Sip Prog1 Area:		**Sip Prog4:**	
Sip Prog2:		**Sip Prog4 Area:**	
Sip Prog2 Area:		**Sip Prog5:**	
Sip Prog3:			

Site Owner

Owner Bill Cycle:	3	**Mail Fax:**	(303)688-6685
Owner Description:	CONSTRUCTION	**Mail Full Name:**	RALPH BELL
Mail Addr 1:	6374 S RACINE CIRCLE	**Mail First Name:**	RALPH
Mail Addr 2:		**Mail Last Name:**	BELL
Mail Type:	STREET	**Mail Phone:**	(303)688-6611
Mail City:	CENTENNIAL	**Mail Province:**	
Mail City Cd:		**Mail State:**	08

Mail Company:		**Mail Title:**	
Mail Country Cd:		**Mail Zip:**	80111
Owner Name:	CASTLE ROCK CONSTRUCTION CO. OF COLO. LLC		
Owner Mail Email:	rbell@crccllc.com		

Site Pollutant

Site ID:	3509	**Pk Co:**	
State FIPS:	08	**Pk Co Mc:**	Z
County FIPS:	777	**Pk Co Re:**	
Data Year:	2010	**Pk Co Re Mc:**	Z
Inventory Year:	2023	**Pk Co Re Units:**	PD
Inventory Year 2:	23	**Pk Co Unc:**	
Pollutant Code:	PM10	**Pk Co Units:**	PD
Is Colorado Hap:	FALSE	**Pk O3:**	
Is Criteria:	TRUE	**Pk O3 Mc:**	Z
Is EPCRA Only:	FALSE	**Pk O3 Re:**	
Is Hap:	FALSE	**Pk O3 Re Mc:**	Z
NEI Pollutant ID:	PM10-PRI	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.072003	**Pk O3 Units:**	PD
Estim Mc:	Z	**EMIS Pot:**	
Estim Unc:	0.072003	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re ESTIM Units:**	TY
Pollutant Name:	PARTICULATE MATTER < 10 UM		

Site Pollutant

Site ID:	3509	**Pk Co:**	
State FIPS:	08	**Pk Co Mc:**	Z
County FIPS:	777	**Pk Co Re:**	
Data Year:	2010	**Pk Co Re Mc:**	Z
Inventory Year:	2023	**Pk Co Re Units:**	PD
Inventory Year 2:	23	**Pk Co Unc:**	
Pollutant Code:	PT	**Pk Co Units:**	PD
Is Colorado Hap:	FALSE	**Pk O3:**	
Is Criteria:	TRUE	**Pk O3 Mc:**	Z
Is EPCRA Only:	FALSE	**Pk O3 Re:**	
Is Hap:	FALSE	**Pk O3 Re Mc:**	Z
NEI Pollutant ID:		**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.072003	**Pk O3 Units:**	PD
Estim Mc:	Z	**EMIS Pot:**	
Estim Unc:	0.072003	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re ESTIM Units:**	TY
Pollutant Name:	TOTAL PARTICULATE MATTER		

Site Pollutant

Site ID:	3509	**Pk Co:**	
State FIPS:	08	**Pk Co Mc:**	Z
County FIPS:	777	**Pk Co Re:**	
Data Year:	2010	**Pk Co Re Mc:**	Z

Inventory Year:	2023	**Pk Co Re Units:**	PD
Inventory Year 2:	23	**Pk Co Unc:**	
Pollutant Code:	PM2.5	**Pk Co Units:**	PD
Is Colorado Hap:	FALSE	**Pk O3:**	
Is Criteria:	TRUE	**Pk O3 Mc:**	Z
Is EPCRA Only:	FALSE	**Pk O3 Re:**	
Is Hap:	FALSE	**Pk O3 Re Mc:**	Z
NEI Pollutant ID:	PM25-PRI	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.072003	**Pk O3 Units:**	PD
Estim Mc:	Z	**EMIS Pot:**	
Estim Unc:	0.072003	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re ESTIM Units:**	TY
Pollutant Name:	PARTICULATE MATTER < 2.5 UM		

Site Pollutant

Site ID:	3509	**Pk Co:**	
State FIPS:	08	**Pk Co Mc:**	Z
County FIPS:	777	**Pk Co Re:**	
Data Year:	2010	**Pk Co Re Mc:**	Z
Inventory Year:	2023	**Pk Co Re Units:**	PD
Inventory Year 2:	23	**Pk Co Unc:**	
Pollutant Code:	VOC	**Pk Co Units:**	PD
Is Colorado Hap:	FALSE	**Pk O3:**	
Is Criteria:	TRUE	**Pk O3 Mc:**	Z
Is EPCRA Only:	FALSE	**Pk O3 Re:**	
Is Hap:	FALSE	**Pk O3 Re Mc:**	Z
NEI Pollutant ID:	VOC	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.032999	**Pk O3 Units:**	PD
Estim Mc:	Z	**EMIS Pot:**	
Estim Unc:	0.032999	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re ESTIM Units:**	TY
Pollutant Name:	VOLATILE ORGANIC COMPOUNDS		

Site Pollutant

Site ID:	3509	**Pk Co:**	
State FIPS:	08	**Pk Co Mc:**	Z
County FIPS:	777	**Pk Co Re:**	
Data Year:	2010	**Pk Co Re Mc:**	Z
Inventory Year:	2023	**Pk Co Re Units:**	PD
Inventory Year 2:	23	**Pk Co Unc:**	
Pollutant Code:	SO2	**Pk Co Units:**	PD
Is Colorado Hap:	FALSE	**Pk O3:**	
Is Criteria:	TRUE	**Pk O3 Mc:**	Z
Is EPCRA Only:	FALSE	**Pk O3 Re:**	
Is Hap:	FALSE	**Pk O3 Re Mc:**	Z
NEI Pollutant ID:	SO2	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.273157	**Pk O3 Units:**	PD
Estim Mc:	Z	**EMIS Pot:**	
Estim Unc:	0.273157	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	

Limit1:		***Pot Unc Mc:***	
Limit1 Mc:		***Pot Unc Units:***	
Limit1 Units:		***Pot Units:***	
Limit2:		***Re Estim:***	0.0
Limit2 Mc:		***Re Estim Mc:***	Z
Limit2 Units:		***Re ESTIM Units:***	TY
Pollutant Name:	SULFUR DIOXIDE		

Site Pollutant

Site ID:	3509	***Pk Co:***	
State FIPS:	08	***Pk Co Mc:***	Z
County FIPS:	777	***Pk Co Re:***	
Data Year:	2010	***Pk Co Re Mc:***	Z
Inventory Year:	2023	***Pk Co Re Units:***	PD
Inventory Year 2:	23	***Pk Co Unc:***	
Pollutant Code:	CO	***Pk Co Units:***	PD
Is Colorado Hap:	FALSE	***Pk O3:***	
Is Criteria:	TRUE	***Pk O3 Mc:***	Z
Is EPCRA Only:	FALSE	***Pk O3 Re:***	
Is Hap:	FALSE	***Pk O3 Re Mc:***	Z
NEI Pollutant ID:	CO	***Pk O3 Re Units:***	PD
Ozone Depleting:	FALSE	***Pk O3 Unc:***	
Estim:	0.619846	***Pk O3 Units:***	PD
Estim Mc:	Z	***EMIS Pot:***	
Estim Unc:	0.619846	***Pot Mc:***	
Estim Units:	TY	***Pot Unc:***	
Limit1:		***Pot Unc Mc:***	
Limit1 Mc:		***Pot Unc Units:***	
Limit1 Units:		***Pot Units:***	
Limit2:		***Re Estim:***	0.0
Limit2 Mc:		***Re Estim Mc:***	Z
Limit2 Units:		***Re ESTIM Units:***	TY
Pollutant Name:	CARBON MONOXIDE		

Site Pollutant

Site ID:	3509	***Pk Co:***	
State FIPS:	08	***Pk Co Mc:***	Z
County FIPS:	777	***Pk Co Re:***	
Data Year:	2010	***Pk Co Re Mc:***	Z
Inventory Year:	2023	***Pk Co Re Units:***	PD
Inventory Year 2:	23	***Pk Co Unc:***	
Pollutant Code:	NOX	***Pk Co Units:***	PD
Is Colorado Hap:	FALSE	***Pk O3:***	
Is Criteria:	TRUE	***Pk O3 Mc:***	Z
Is EPCRA Only:	FALSE	***Pk O3 Re:***	
Is Hap:	FALSE	***Pk O3 Re Mc:***	Z
NEI Pollutant ID:	NOX	***Pk O3 Re Units:***	PD
Ozone Depleting:	FALSE	***Pk O3 Unc:***	
Estim:	2.646031	***Pk O3 Units:***	PD
Estim Mc:	Z	***EMIS Pot:***	
Estim Unc:	2.646031	***Pot Mc:***	
Estim Units:	TY	***Pot Unc:***	
Limit1:		***Pot Unc Mc:***	
Limit1 Mc:		***Pot Unc Units:***	
Limit1 Units:		***Pot Units:***	
Limit2:		***Re Estim:***	0.0
Limit2 Mc:		***Re Estim Mc:***	Z
Limit2 Units:		***Re ESTIM Units:***	TY
Pollutant Name:	NITROGEN OXIDES		

Stack

Site ID:	3509	***Plume Height:***	30

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Stack ID:	001	**Rough Terrain Ind:**	
State FIPS:	08	**Diameter:**	0.5
County FIPS:	777	**Diameter Meter:**	0.15
Data Year:	2010	**Geo Origin:**	plant
Inventory Year:	2023	**Height:**	12.0
Inventory Year 2:	23	**Height Meter:**	4.0
Apcd Stack ID:	777-3509-S001	**Horiz Dat:**	2
Cem Recorder Flag:		**Lining Code:**	
Distance:		**Acc Units:**	4
Exit Gas Flow Rate:	1925.0	**Accuracy:**	50.0
Exit Gas Temp:	883.0	**Method Code:**	I2
Exit Gas Kelvin:	746.0	**Pt Lin Area:**	P
Gas Velocity:	163.39999389648438	**Src Scale:**	2
Gas Meters Sec:	49.8	**Latitude:**	395728.3226
Bldg Height:	0	**Longitude:**	1050952.1385
Bldg Length:	0	**Type Code:**	W
Bldg Width:	0	**UTM Horiz:**	485.951
Stack Height:	0	**UTM Vert:**	4423.093
NEI Em Rls Pt Typ:	5	**Vert Meas:**	1671.16
NEI Exit Gas Flow:	32.0	**UTM Zone:**	13.0
NEI Horiz Mc:	019	**X Coord:**	-105.16448291666667
NEI Ref Pt Code:	105	**Y Coord:**	39.95786738888889
Emission Release Desc:	CATERPILLAR DIESEL ENGINE		
Description:	Elevation source: National Elevaton Dataset 1/3 Arc Second		
Description Category:	PC		
Stack Type:	A VERTICAL STACK WITH A WEATHER CAP OR SIMILAR OBSTRUC. IN EXHAUST STREAM		

Stack Pollutant

Site ID:	3509	**Pk Co:**	
Stack ID:	001	**Pk Co Mc:**	Z
State Fips:	08	**Pk Co Re:**	
County Fip:	777	**Pk Co Re Mc:**	Z
Data Year:	2010	**Pk Co Re Units:**	PD
Inventory Year:	2023	**Pk Co Unc:**	
Inventory Year 2:	23	**Pk Co Units:**	PD
Pollutant Code:	CO	**Pk O3:**	
Is Colorado Hap:	FALSE	**Pk O3 Mc:**	Z
Is Criteria:	TRUE	**Pk O3 Re:**	
Is Epcra Only:	FALSE	**Pk O3 Re Mc:**	Z
Is Hap:	FALSE	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.619846	**Pk O3 Units:**	PD
Estim Mc:	Z	**Pot:**	
Estim Unc:	0.619846	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re Estim Units:**	TY
Pollutant Name:	CARBON MONOXIDE		

Stack Pollutant

Site ID:	3509	**Pk Co:**	
Stack ID:	001	**Pk Co Mc:**	Z
State Fips:	08	**Pk Co Re:**	
County Fip:	777	**Pk Co Re Mc:**	Z
Data Year:	2010	**Pk Co Re Units:**	PD
Inventory Year:	2023	**Pk Co Unc:**	
Inventory Year 2:	23	**Pk Co Units:**	PD
Pollutant Code:	PM2.5	**Pk O3:**	
Is Colorado Hap:	FALSE	**Pk O3 Mc:**	Z
Is Criteria:	TRUE	**Pk O3 Re:**	
Is Epcra Only:	FALSE	**Pk O3 Re Mc:**	Z

Is Hap:	FALSE	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.072003	**Pk O3 Units:**	PD
Estim Mc:	Z	**Pot:**	
Estim Unc:	0.072003	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re Estim Units:**	TY
Pollutant Name:	PARTICULATE MATTER < 2.5 UM		

Stack Pollutant

Site ID:	3509	**Pk Co:**	
Stack ID:	001	**Pk Co Mc:**	Z
State Fips:	08	**Pk Co Re:**	
County Fip:	777	**Pk Co Re Mc:**	Z
Data Year:	2010	**Pk Co Re Units:**	PD
Inventory Year:	2023	**Pk Co Unc:**	
Inventory Year 2:	23	**Pk Co Units:**	PD
Pollutant Code:	PT	**Pk O3:**	
Is Colorado Hap:	FALSE	**Pk O3 Mc:**	Z
Is Criteria:	TRUE	**Pk O3 Re:**	
Is Epcra Only:	FALSE	**Pk O3 Re Mc:**	Z
Is Hap:	FALSE	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.072003	**Pk O3 Units:**	PD
Estim Mc:	Z	**Pot:**	
Estim Unc:	0.072003	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re Estim Units:**	TY
Pollutant Name:	TOTAL PARTICULATE MATTER		

Stack Pollutant

Site ID:	3509	**Pk Co:**	
Stack ID:	001	**Pk Co Mc:**	Z
State Fips:	08	**Pk Co Re:**	
County Fip:	777	**Pk Co Re Mc:**	Z
Data Year:	2010	**Pk Co Re Units:**	PD
Inventory Year:	2023	**Pk Co Unc:**	
Inventory Year 2:	23	**Pk Co Units:**	PD
Pollutant Code:	NOX	**Pk O3:**	
Is Colorado Hap:	FALSE	**Pk O3 Mc:**	Z
Is Criteria:	TRUE	**Pk O3 Re:**	
Is Epcra Only:	FALSE	**Pk O3 Re Mc:**	Z
Is Hap:	FALSE	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	2.646031	**Pk O3 Units:**	PD
Estim Mc:	Z	**Pot:**	
Estim Unc:	2.646031	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re Estim Units:**	TY
Pollutant Name:	NITROGEN OXIDES		

Stack Pollutant

Site ID:	3509	***Pk Co:***	
Stack ID:	001	***Pk Co Mc:***	Z
State Fips:	08	***Pk Co Re:***	
County Fip:	777	***Pk Co Re Mc:***	Z
Data Year:	2010	***Pk Co Re Units:***	PD
Inventory Year:	2023	***Pk Co Unc:***	
Inventory Year 2:	23	***Pk Co Units:***	PD
Pollutant Code:	PM10	***Pk O3:***	
Is Colorado Hap:	FALSE	***Pk O3 Mc:***	Z
Is Criteria:	TRUE	***Pk O3 Re:***	
Is Epcra Only:	FALSE	***Pk O3 Re Mc:***	Z
Is Hap:	FALSE	***Pk O3 Re Units:***	PD
Ozone Depleting:	FALSE	***Pk O3 Unc:***	
Estim:	0.072003	***Pk O3 Units:***	PD
Estim Mc:	Z	***Pot:***	
Estim Unc:	0.072003	***Pot Mc:***	
Estim Units:	TY	***Pot Unc:***	
Limit1:		***Pot Unc Mc:***	
Limit1 Mc:		***Pot Unc Units:***	
Limit1 Units:		***Pot Units:***	
Limit2:		***Re Estim:***	0.0
Limit2 Mc:		***Re Estim Mc:***	Z
Limit2 Units:		***Re Estim Units:***	TY
Pollutant Name:	PARTICULATE MATTER < 10 UM		

Stack Pollutant

Site ID:	3509	***Pk Co:***	
Stack ID:	001	***Pk Co Mc:***	Z
State Fips:	08	***Pk Co Re:***	
County Fip:	777	***Pk Co Re Mc:***	Z
Data Year:	2010	***Pk Co Re Units:***	PD
Inventory Year:	2023	***Pk Co Unc:***	
Inventory Year 2:	23	***Pk Co Units:***	PD
Pollutant Code:	VOC	***Pk O3:***	
Is Colorado Hap:	FALSE	***Pk O3 Mc:***	Z
Is Criteria:	TRUE	***Pk O3 Re:***	
Is Epcra Only:	FALSE	***Pk O3 Re Mc:***	Z
Is Hap:	FALSE	***Pk O3 Re Units:***	PD
Ozone Depleting:	FALSE	***Pk O3 Unc:***	
Estim:	0.032999	***Pk O3 Units:***	PD
Estim Mc:	Z	***Pot:***	
Estim Unc:	0.032999	***Pot Mc:***	
Estim Units:	TY	***Pot Unc:***	
Limit1:		***Pot Unc Mc:***	
Limit1 Mc:		***Pot Unc Units:***	
Limit1 Units:		***Pot Units:***	
Limit2:		***Re Estim:***	0.0
Limit2 Mc:		***Re Estim Mc:***	Z
Limit2 Units:		***Re Estim Units:***	TY
Pollutant Name:	VOLATILE ORGANIC COMPOUNDS		

Stack Pollutant

Site ID:	3509	***Pk Co:***	
Stack ID:	001	***Pk Co Mc:***	Z
State Fips:	08	***Pk Co Re:***	
County Fip:	777	***Pk Co Re Mc:***	Z
Data Year:	2010	***Pk Co Re Units:***	PD
Inventory Year:	2023	***Pk Co Unc:***	
Inventory Year 2:	23	***Pk Co Units:***	PD
Pollutant Code:	SO2	***Pk O3:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Is Colorado Hap:	FALSE	**Pk O3 Mc:**	Z		
Is Criteria:	TRUE	**Pk O3 Re:**			
Is Epcra Only:	FALSE	**Pk O3 Re Mc:**	Z		
Is Hap:	FALSE	**Pk O3 Re Units:**	PD		
Ozone Depleting:	FALSE	**Pk O3 Unc:**			
Estim:	0.273157	**Pk O3 Units:**	PD		
Estim Mc:	Z	**Pot:**			
Estim Unc:	0.273157	**Pot Mc:**			
Estim Units:	TY	**Pot Unc:**			
Limit1:		**Pot Unc Mc:**			
Limit1 Mc:		**Pot Unc Units:**			
Limit1 Units:		**Pot Units:**			
Limit2:		**Re Estim:**	0.0		
Limit2 Mc:		**Re Estim Mc:**	Z		
Limit2 Units:		**Re Estim Units:**	TY		
Pollutant Name:	SULFUR DIOXIDE				

4	*1 of 1*	*W*	*0.12 / 619.30*	*5,477.62 / 11*	***Superior, CO - Tesla Supercharger*** ***2 South Marshall Road*** ***Superior CO 80027***	*ALT FUELS*

ID:	167423	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	877-798-3752	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2020-10-05	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:	CAR_DEALER	**Hydrogen Pressures:**	
Dt Last Confirmed:	2023-07-01	**Hydrogen Standards:**	
Updated at:	2023-07-14 19:41:28 UTC	**Latitude:**	39.954889
Access Code:	public	**Longitude:**	-105.164646
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:			
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Open: The station is open.		
Owner Type Desc:	Privately owned		
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	The location is from a real GPS readout at the station.		
Group with Access Desc:	Publicly available to all customers.		
LPG Primary Desc:			
Intersection Directions:			
Access Days Time:	24 hours daily		
Restricted Access:			

5	*1 of 4*	*NE*	*0.13 / 685.53*	*5,459.40 / -7*	***CABLELABS EV STATION 4*** ***858 Coal Creek Cir*** ***Louisville CO 80027***	*ALT FUELS*

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

ID:	182581	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	888-758-4389	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2021-01-27	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:		**Hydrogen Pressures:**	
Dt Last Confirmed:	2023-08-30	**Hydrogen Standards:**	
Updated at:	2023-08-30 00:09:20 UTC	**Latitude:**	39.956533
Access Code:	public	**Longitude:**	-105.160335
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:			
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Open: The station is open.		
Owner Type Desc:			
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	The location is from a real GPS readout at the station.		
Group with Access Desc:	Publicly available to all customers.		
LPG Primary Desc:			
Intersection Directions:			
Access Days Time:	Mon 5:00pm - 12:00am; Tue 5:00pm - 12:00am; Wed 5:00pm - 12:00am; Thu 5:00pm - 12:00am; Fri 5:00pm - 12:00am; Sat 12:00am - 12:00am; Sun 12:00am - 12:00am		
Restricted Access:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	2 of 4	NE	0.13 / 685.53	5,459.40 / -7	CABLELABS EV STATION 3 858 Coal Creek Cir Louisville CO 80027	ALT FUELS

ID:	182619	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	888-758-4389	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2021-01-27	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:		**Hydrogen Pressures:**	
Dt Last Confirmed:	2023-08-30	**Hydrogen Standards:**	
Updated at:	2023-08-30 00:09:45 UTC	**Latitude:**	39.956499
Access Code:	public	**Longitude:**	-105.160425
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Cards Accepted:
CNG Statn Sells Renewable Na:
LNG Statn Sells Renewable Na:
Maximum Vehicle Class:
RD Blended With Biodiesel:
RD Blends:
RD Blends French:
RD Maximum Biodiesel Level:
Status: Open: The station is open.
Owner Type Desc:
E85 Blender Pump Desc:
NG Fill Type Desc:
NG Vehicle Class Desc:
Geocode Status Desc: The location is from a real GPS readout at the station.
Group with Access Desc: Publicly available to all customers.
LPG Primary Desc:
Intersection Directions:
Access Days Time: Mon 5:00pm - 12:00am; Tue 5:00pm - 12:00am; Wed 5:00pm - 12:00am; Thu 5:00pm - 12:00am; Fri 5:00pm - 12:00am; Sat 12:00am - 12:00am; Sun 12:00am - 12:00am
Restricted Access:

5	*3 of 4*	*NE*	*0.13 / 685.53*	*5,459.40 / -7*	***CABLELABS EV STATION 2*** ***858 Coal Creek Cir*** ***Louisville CO 80027***	*ALT FUELS*

ID: 182618
Fuel Type Code: ELEC: Electric
Station Phone: 888-758-4389
Expected Date:
BD Blends:
NG PSI:
Federal Agency ID:
Open Date: 2021-01-27
Hydrogen is Retail:
Federal Agency:
Facility Type:
Dt Last Confirmed: 2023-08-30
Updated at: 2023-08-30 00:09:44 UTC
Access Code: public
Access Detail Code:
Groups with Access Code: Public
Groups with Access Code Fr: Public
Fed Agency Name:
Hydrogen Status Link:
E85 Other Ethanol Blends:
NPS Unit Name:
Cards Accepted:
CNG Statn Sells Renewable Na:
LNG Statn Sells Renewable Na:
Maximum Vehicle Class:
RD Blended With Biodiesel:
RD Blends:
RD Blends French:
RD Maximum Biodiesel Level:
CNG Dispenser No:
CNG Site Renew Src:
CNG Tot Compr Cap:
CNG Storage Cap:
CNG Fill Type Code:
CNG PSI:
CNG Vehicle Class:
LNG Site Renew Src:
LNG Vehicle Class:
LPG Nozzle Types:
Hydrogen Pressures:
Hydrogen Standards:
Latitude: 39.956457
Longitude: -105.160404

Status: Open: The station is open.
Owner Type Desc:
E85 Blender Pump Desc:
NG Fill Type Desc:
NG Vehicle Class Desc:
Geocode Status Desc: The location is from a real GPS readout at the station.
Group with Access Desc: Publicly available to all customers.
LPG Primary Desc:
Intersection Directions:
Access Days Time: Mon 5:00pm - 12:00am; Tue 5:00pm - 12:00am; Wed 5:00pm - 12:00am; Thu 5:00pm - 12:00am; Fri 5:00pm - 12:00am; Sat 12:00am - 12:00am; Sun 12:00am - 12:00am
Restricted Access:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	4 of 4	NE	0.13 / 685.53	5,459.40 / -7	CABLELABS EV STATION 1 858 Coal Creek Cir Louisville CO 80027	ALT FUELS

ID:	182634	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	888-758-4389	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2021-01-27	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:		**Hydrogen Pressures:**	
Dt Last Confirmed:	2023-08-30	**Hydrogen Standards:**	
Updated at:	2023-08-30 00:10:01 UTC	**Latitude:**	39.956428
Access Code:	public	**Longitude:**	-105.160471
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:			
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Open: The station is open.		
Owner Type Desc:			
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	The location is from a real GPS readout at the station.		
Group with Access Desc:	Publicly available to all customers.		
LPG Primary Desc:			
Intersection Directions:			
Access Days Time:	Mon 5:00pm - 12:00am; Tue 5:00pm - 12:00am; Wed 5:00pm - 12:00am; Thu 5:00pm - 12:00am; Fri 5:00pm - 12:00am; Sat 12:00am - 12:00am; Sun 12:00am - 12:00am		
Restricted Access:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	1 of 2	W	0.18 / 972.33	5,490.84 / 24	My Goods Market #6529 191 S McCaslin Blvd Louisville 80027 CO	UST

Facility ID:	6779	**Fac Name (COSTIS):**	My Goods Market #6529
FacilityName(OPS):	My Goods Market #6529	**Address (COSTIS):**	191 S McCaslin Blvd Louisville 80027
FacilityType(OPS):	Retail	**County (COSTIS):**	Boulder
Fac Category (OPS):	Retail Gas Station	**Latitude (CDLE):**	39.969254
Address (OPS):	191 S McCaslin Blvd	**Longitude (CDLE):**	-105.164289
City (OPS):	Louisville	**Fac Type (CDLE):**	Retail
Zip Code (OPS):	80027	**FacCategry(CDLE):**	Retail Gas Station
County (OPS):	Boulder	**State (OPS):**	CO
LatLong (OPS):	39.969254, -105.164289	**City (CDLE):**	Louisville
FacName (CDLE):	My Goods Market #6529	**Zip (CDLE):**	80027
Address (CDLE):	191 S McCaslin Blvd	**County (CDLE):**	Boulder
State (CDLE):			
Data Source(s):	Colorado Storage Tank Information System (COSTIS) (As of October, 2021); Colorado Department of Labor and Employment (CDLE); Oil & Public Safety(OPS) Regulated Storage Tanks		

Facility Information (CDLE)

Count of Tank Tag:	2	***Accnt Holdr Name:***	Apro LLC DBA United Pacific
No. Dispensers:	24	***Type:***	Retail
Owner ID:	OWNR-22690		

Owner Information (CDLE)

Contact Name:	Apro LLC DBA United Pacific	***Middle Init:***	
First Name:			
Company Name:	Apro LLC DBA United Pacific		
Last Name:	Apro LLC DBA United Pacific		
Address:	4130 Cover St, Long Beach, CA 90808		
Comment:	aka; CF United LLC		

UST Tanks (COSTIS) (As of October 2021)

Tank ID:	18041	***Owner ID:***	22690
Tank Tag:	'6779-2	***Tank Owner:***	
Tank Type Desc:	UST	***County:***	Boulder
Tank Count:	46668	***Product Name:***	Unleaded Premium (PUL)
Capacity:	15000		
Facility Owner:	Apro LLC DBA United Pacific		
Facility Name Address:	My Goods Market #6529 191 S McCaslin Blvd Louisville 80027		

Tank ID:	18040	***Owner ID:***	22690
Tank Tag:	'6779-1	***Tank Owner:***	
Tank Type Desc:	UST	***County:***	Boulder
Tank Count:	46668	***Product Name:***	Unleaded Regular (RUL)
Capacity:	15000		
Facility Owner:	Apro LLC DBA United Pacific		
Facility Name Address:	My Goods Market #6529 191 S McCaslin Blvd Louisville 80027		

UST Tanks 1 (CDLE)

Tank Tag:	6779-1	***Overfill Preven:***	FV: Fill Tube Valve
Tank Type:	UST	***Product Type/Name:***	Unleaded Regular (RUL)
Tank Status:	Currently In Use	***Piping Wall Type:***	None
Capacity:	15000	***Tank Wall Type:***	
Install Date:	1/1/1995	***Piping System:***	
Date Closed:		***Piping Type:***	UG: Underground
Tank Material:	FRP: Fiberglass Reinforced Plastic		
Piping Material:	FRP: Fiberglass Reinforced Plastic		

UST Tanks 2 (CDLE)

Closure Meth ID:		***No Fee:***	No
Unregulated:	FALSE	***Anch Method Desc:***	
Last Used Date:		***Pipe Reld Meth1 ID:***	L5: Annual Tightness Testing
Del Prohib Date:		***Pipe Reldet Date:***	
Spill Protected:		***Backfill Mat Desc:***	
Spl Container Size:	5	***Bfill DrtCvr Amt:***	0
Spl Protection Dt:		***Manifold:***	No
Spl Container Mfg:	OPW	***Registration Date:***	7/30/2021
Spl Container Mdel:	1-2100	***Compartment:***	FALSE
Tank Reld Meth1 ID:		***Cpmet:***	Yes
Tank Lining Date:		***Invault:***	FALSE
CP Test Date:			

UST Tanks 1 (CDLE)

Tank Tag:	6779-2	**Overfill Preven:**	FV: Fill Tube Valve
Tank Type:	UST	**Product Type/Name:**	Unleaded Premium (PUL)
Tank Status:	Currently In Use	**Piping Wall Type:**	None
Capacity:	15000	**Tank Wall Type:**	
Install Date:	1/3/1995	**Piping System:**	
Date Closed:		**Piping Type:**	UG: Underground
Tank Material:	FRP: Fiberglass Reinforced Plastic		
Piping Material:	FRP: Fiberglass Reinforced Plastic		

UST Tanks 2 (CDLE)

Closure Meth ID:		**No Fee:**	No
Unregulated:	FALSE	**Anch Method Desc:**	
Last Used Date:		**Pipe Reld Meth1 ID:**	L5: Annual Tightness Testing
Del Prohib Date:		**Pipe Reldet Date:**	
Spill Protected:		**Backfill Mat Desc:**	
Spl Container Size:	5	**Bfill DrtCvr Amt:**	0
Spl Protection Dt:		**Manifold:**	No
Spl Container Mfg:	OPW	**Registration Date:**	7/30/2021
Spl Container Mdel:	1-2100	**Compartment:**	FALSE
Tank Reld Meth1 ID:		**Cpmet:**	Yes
Tank Lining Date:		**Invault:**	FALSE
CP Test Date:			

Oil & Public Safety Regulated Storage Tanks (COSTIS)

Tank Tag:	6779-1	**Leak Detector Type:**	E: Electronic
Tank Status:	Currently In Use	**Capacity Gallons :**	15000
Tank Type:	UST	**Product:**	Unleaded Regular (RUL)
Tank Name:	TNK-013060	**Piping Type:**	UG: Underground
Installation Date:	1/1/1995	**Piping System:**	
Closure Date:		**Piping Material:**	FRP: Fiberglass Reinforced Plastic
Tank Material:	FRP: Fiberglass Reinforced Plastic	**Piping Wall Type:**	None
Tank Wall Type:		**Address:**	191 S McCaslin Blvd
Facility Name:	My Goods Market #6529	**City:**	Louisville
Facility Type:	Retail	**County:**	Boulder
Facility Category:	Retail Gas Station	**ZIP Code:**	80027
Overfill Preven:	FV: Fill Tube Valve		
Tank Corsn Protection Meth:	Fiberglass (n/a)		
Tank Rel Detn Mthd Primary:	T1: ATG .2/.1gph Mthly Mntrg		
Tank Rel Detn Mthd Secondary:	T2: Inter Mntrg w/ Sensor		
Piping Corsn Protection (PCP):	Non-metallic		
PCP at Tank:	No Electrolyte Contact (n/a)		
PCP at Dispenser:	No Electrolyte Contact (n/a)		
Piping Rel Detn Mthd Primary:	L5: Annual Tightness Testing		
Piping Rel Detn Mthd Secondary:			

Tank Tag:	6779-2	**Leak Detector Type:**	E: Electronic
Tank Status:	Currently In Use	**Capacity Gallons :**	15000
Tank Type:	UST	**Product:**	Unleaded Premium (PUL)
Tank Name:	TNK-013061	**Piping Type:**	UG: Underground
Installation Date:	1/3/1995	**Piping System:**	
Closure Date:		**Piping Material:**	FRP: Fiberglass Reinforced Plastic
Tank Material:	FRP: Fiberglass Reinforced Plastic	**Piping Wall Type:**	None
Tank Wall Type:		**Address:**	191 S McCaslin Blvd
Facility Name:	My Goods Market #6529	**City:**	Louisville
Facility Type:	Retail	**County:**	Boulder
Facility Category:	Retail Gas Station	**ZIP Code:**	80027
Overfill Preven:	FV: Fill Tube Valve		
Tank Corsn Protection Meth:	Fiberglass (n/a)		
Tank Rel Detn Mthd Primary:	T1: ATG .2/.1gph Mthly Mntrg		
Tank Rel Detn Mthd Secondary:	T2: Inter Mntrg w/ Sensor		
Piping Corsn Protection (PCP):	Non-metallic		
PCP at Tank:	No Electrolyte Contact (n/a)		
PCP at Dispenser:	No Electrolyte Contact (n/a)		
Piping Rel Detn Mthd Primary:	L5: Annual Tightness Testing		

Piping Rel Detn Mthd Secondary:

UST Owner (COSTIS) (As of October 2021)

Owner ID:	22690	***Address1:***	4130 Cover St
First Name:		***City:***	Long Beach
Middle Init:		***State:***	CA
Last Name:	Apro LLC DBA United Pacific	***County:***	Los Angeles
Full Name:		***Zip Code:***	90808

Oil & Public Safety Regulated Storage Tank Details

No of Tanks: 2

Facility Contact Details (CDLE)

Contact ID:	0033h00000mtbFQ	***Role:***	Release Detection Records
Costis ID:	FACCON-6779-43476-32-29087	***Fac Contact Name:***	FCON-020202
Active:	FALSE	***Contact Last Name:***	Convenience Retailers LLC
Contact ID:	0033h00000mtbFQ	***Role:***	Facility Owner
Costis ID:	FACOWN-6779-43476-Jan 30 2009 12:00AM	***Fac Contact Name:***	FCON-020201
Active:	FALSE	***Contact Last Name:***	Convenience Retailers LLC
Contact ID:	0033h00000lKygC	***Role:***	Facility Owner
Costis ID:	FACOWN-6779-37282-Nov 28 2003 11:30AM	***Fac Contact Name:***	FCON-006608
Active:	FALSE	***Contact Last Name:***	ConocoPhillips Company
Contact ID:	0033h00000lKyz2	***Role:***	A/B Operator
Costis ID:	ABOP-6779-7436	***Fac Contact Name:***	FCON-008822
Active:	TRUE	***Contact Last Name:***	David Dhien
Contact ID:	0033h00000lKyfx	***Role:***	Facility Owner
Costis ID:	FACOWN-6779-1545-Mar 20 1997 12:00AM	***Fac Contact Name:***	FCON-006564
Active:	FALSE	***Contact Last Name:***	ConocoPhillips
Contact ID:	0033h00000lKwtS	***Role:***	Facility Owner
Costis ID:	FACOWN-6779-48718-Jun 9 2015 2:02PM	***Fac Contact Name:***	FCON-000550
Active:	TRUE	***Contact Last Name:***	Apro LLC DBA United Pacific

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6	***2 of 2***	***W***	***0.18 / 972.33***	***5,490.84 / 24***	***My Goods Market #6529 191 S McCaslin Blvd Louisville 80027 CO***	***LST***

Facility ID:	6779	***Fac Name(CDLE):***	My Goods Market #6529
Event ID:		***Address(CDLE):***	191 S McCaslin Blvd
Facility Name(OPS):	My Goods Market #6529	***Fac Type(CDLE):***	Retail
Facility Type(OPS):	Retail	***Fac Category(CDLE):***	Retail Gas Station
Fac Category(OPS):	Retail Gas Station	***City(CDLE):***	Louisville
Address(OPS):	191 S McCaslin Blvd	***Zip(CDLE):***	80027
City(OPS):	Louisville	***County(CDLE):***	Boulder
Zip Code(OPS):	80027	***State(CDLE):***	
County(OPS):	Boulder	***Latitude(CDLE):***	39.969254
State(OPS):	CO	***Longitude(CDLE):***	-105.164289
Lat Long(OPS):	39.969254, -105.164289		
Fac Name(COSTIS):	My Goods Market #6529		
Address (COSTIS):	191 S McCaslin Blvd Louisville 80027		
County (COSTIS):	Boulder		
Original Source:	Colorado Storage Tank Information System (COSTIS) (As of October, 2021); Colorado Department of Labor and Employment (CDLE); Oil & Public Safety(OPS) Regulated Storage Tanks; OPS Petroleum Release Events in Colorado - Petroleum Release Events		

Owner ID: 22690

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner Name:

Events (CDLE)

Event ID:	6007	**Proj. Closure Date:**	
Alt Event ID:		**Category:**	
Status:	Closed	**Sardonyx ID:**	
UST Tank Count:	2	**MTBE Classifica:**	
AST Tank Count:	0	**Sum of Reimbur Amt:**	
Source of Release:		**Reviewer Full Name:**	Craig Workman
Cause of Release:		**Logged On:**	10/21/1997
Confirm Rel Dt:	8/21/1997	**Logged By:**	
Site Name:	My Goods Market #6529		
Loc Addr:			
Loc Addr2:			
Loc Addr3:			
Aka Name:			
Aka Loc Addr:			

Facility (CDLE)

Owner Costis ID:	OWNR-22690	**Type:**	Retail
No of Active Tanks:	2	**Facility Owner:**	Apro LLC DBA United Pacific
No of Metred Prod:	24		

Events (COSTIS) (As of October 2021)

Event ID:	6007	**Log Date:**	10/21/1997
Process Status Name:	Closed		
Site Name:	Conoco #6447		
Facility Name:			
Address:	191 S McCaslin Blvd Louisville CO 80027		
Loc Address:	191 Mccaslin Blvd Superior 80027		
Loc City:	Superior		
Loc County:	Boulder		

OPS Regulated Storage Tanks

No of Tanks: 2

OPS Petroleum Release Events in Colorado - Petroleum Release Events

Event ID:	6007	**Phone:**	(303) 318-4357
Release No:	REL-001202	**City:**	Louisville
Status:	Closed	**Zip:**	80027
Release Date:	8/21/1997	**State:**	CO
Closure Date:		**County:**	Boulder
NFA Type:	Administrative	**Latitude:**	39.969254
Release Cause:		**Longitude:**	-105.164289
Reimbursement Total:		**Latitude Longitude:**	39.969254, -105.164289
Contact:	Craig Workman		
Release Source:			
Site Name:	My Goods Market #6529		
Address:	191 S McCaslin Blvd		
Email:	cdle_ops_public_record_center@state.co.us		
Link :	https://socgov18.force.com/s/release/a183h000003KVZM		

7	1 of 1	WSW	0.21 / 1,090.85	5,485.82 / 19	TOS TOWN HALL1 Park Pl Superior CO 80027	ALT FUELS

ID: 87935 **CNG Dispenser No:**

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	888-758-4389	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2017-10-07	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:		**Hydrogen Pressures:**	
Dt Last Confirmed:	2023-08-30	**Hydrogen Standards:**	
Updated at:	2023-08-30 00:10:59 UTC	**Latitude:**	39.953549
Access Code:	public	**Longitude:**	-105.166117
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:			
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Open: The station is open.		
Owner Type Desc:			
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	The location is from a real GPS readout at the station.		
Group with Access Desc:	Publicly available to all customers.		
LPG Primary Desc:			
Intersection Directions:			
Access Days Time:	24 hours daily		
Restricted Access:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	1 of 2	WSW	0.21 / 1,100.37	5,487.54 / 21	**TOWN OF SUPERIOR PUBLIC WORKS** **124 E. Coal Creek Rd.** **Superior CO 80027**	SWF/LF

Loc ID:	BLD6
Cert of Reg ID:	

Facility Map Info (REST)

Location ID:	BLD 1418
FID:	1960
Primary AC:	
Facility Name:	TOWN OF SUPERIOR PUBLIC WORKS
Address:	124 E. Coal Creek Rd.
City:	Superior
Zip:	80027
County Name:	BOULDER
Latitude:	39.954002
Longitude:	-105.166145
Y:	39.95400200000176
X:	-105.16614500000236

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	2 of 2	WSW	0.21 / 1,100.37	5,487.54 / 21	**Town of Superior - Town Hall** **124 E Coal Creek Dr**	ALT FUELS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
					Superior CO 80027	

ID:	38523	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	303-499-3675	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2020-07-01	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:	MUNI_GOV	**Hydrogen Pressures:**	
Dt Last Confirmed:	2022-11-10	**Hydrogen Standards:**	
Updated at:	2023-02-14 15:54:11 UTC	**Latitude:**	39.953798
Access Code:	public	**Longitude:**	-105.166116
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:	LD		
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Open: The station is open.		
Owner Type Desc:	Local government owned		
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	Premise (building name, property name, shopping center, etc.) level accuracy.		
Group with Access Desc:	Publicly available to all customers.		
LPG Primary Desc:			
Intersection Directions:	McCaslin and E Coal Creek Drive		
Access Days Time:	24 hours daily		
Restricted Access:	false		

9	1 of 1	W	0.29 / 1,526.27	5,500.09 / 33	JENKINS BOULDER COUNTY LOUISVILLE CO 80027	MRDS

Dep ID:	10165874	**I1:**	83
Dev Status:	PRODUCER	**Latitude:**	39.954529
Code List:	SDG	**Longitude:**	-105.168091
Url:	http://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10165874		

Commodity

I1:	26	**Line:**	1
Code:	SDG	**Inserted By:**	MAS migration
Commodity:	Sand and Gravel, Cons	**Insert Date:**	29-OCT-2002 09:00:24
Commodity Type:	Non-metallic	**Updated By:**	USGS
Commodity Group:	Sand and Gravel	**Update Date:**	29-OCT-2002 09:01:38
Importance:	Primary		

Names

I1:	15	**Inserted By:**	MAS migration

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Status:	Current	**Insert Date:**	29-OCT-02
Site Name:	Jenkins	**Updated By:**	USGS
Line:	1	**Update Date:**	29-OCT-02

10 **1 of 2** **WNW** **0.38 / 2,021.23** **5,506.55 / 40** **CDOT Superior**
7979 Marshall Rd Louisville 80027 CO **LST**

Facility ID:	7679	**Fac Name(CDLE):**	CDOT Superior
Event ID:		**Address(CDLE):**	7979 Marshall Rd
Facility Name(OPS):	CDOT Superior	**Fac Type(CDLE):**	Non-Retail
Facility Type(OPS):	Non-Retail	**Fac Category(CDLE):**	State/Local Government
Fac Category(OPS):	State/Local Government	**City(CDLE):**	Louisville
Address(OPS):	7979 Marshall Rd	**Zip(CDLE):**	80027
City(OPS):	Louisville	**County(CDLE):**	Boulder
Zip Code(OPS):	80027	**State(CDLE):**	
County(OPS):	Boulder	**Latitude(CDLE):**	39.962239
State(OPS):	CO	**Longitude(CDLE):**	-105.178105
Lat Long(OPS):	39.962239, -105.178105		
Fac Name(COSTIS):	CDOT Superior		
Address (COSTIS):	7979 Marshall Rd Louisville 80027		
County (COSTIS):	Boulder		
Original Source:	Colorado Storage Tank Information System (COSTIS) (As of October, 2021); Colorado Department of Labor and Employment (CDLE); Oil & Public Safety(OPS) Regulated Storage Tanks; OPS Petroleum Release Events in Colorado - Petroleum Release Events		
Owner ID:	1046		
Owner Name:			

Events (CDLE)

Event ID:	518	**Proj. Closure Date:**	
Alt Event ID:	6420-1	**Category:**	
Status:	Closed	**Sardonyx ID:**	
UST Tank Count:	3	**MTBE Classifica:**	
AST Tank Count:	0	**Sum of Reimbur Amt:**	9193.83
Source of Release:		**Reviewer Full Name:**	Edgar Ethington
Cause of Release:		**Logged On:**	5/12/1992
Confirm Rel Dt:	5/12/1992	**Logged By:**	
Site Name:	CDOT Superior		
Loc Addr:			
Loc Addr2:			
Loc Addr3:			
Aka Name:			
Aka Loc Addr:			

Reimbursement Application (CDLE)

Rap ID:	RAP-6584	**Eligibil Type Desc:**	Tank Owner/Operator
Protest ID:		**Rap Payee Type ID:**	
Rap Status:	Paid	**Reimbursement Req:**	19993.57
Application Type:	Original	**Total Reimburse:**	19993.57
User Group Name:		**Max Amt Reduction:**	
FPR Date:	6/20/2003	**PSTC Date:**	6/20/2003
Protest Amount:			
Payee:	CDOT		
Spec Cond:			
Note:	Colorado Department of Labor and Employment (CDLE)		

Corrective Action Plan (CDLE)

Action Plan No:	ACTP-027781
Release No:	REL-003220
Status:	Approved

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Facility (CDLE)

Owner Costis ID:	OWNR-1046	***Type:***	Non-Retail
No of Active Tanks:	0	***Facility Owner:***	CDOT- Region 4 Business Office
No of Metred Prod:	0		

Events (COSTIS) (As of October 2021)

Event ID:	518	***Log Date:***	5/12/1992
Process Status Name:	Closed		
Site Name:	CDOT Superior		
Facility Name:			
Address:	7979 Marshall Rd Louisville CO 80027		
Loc Address:	7979 Marshall Dr Boulder 80303		
Loc City:	Boulder		
Loc County:	Boulder		

Reimbursement Application (COSTIS) (As of October 2021)

RAP ID:	6584	***Event ID:***	518
Facility ID:	7679	***PSTC Date:***	6/20/2003
Payee Name:	CDOT		

OPS Regulated Storage Tanks

No of Tanks:	0

OPS Petroleum Release Events in Colorado - Petroleum Release Events

Event ID:	518	***Phone:***	(303) 318-4357
Release No:	REL-003220	***City:***	Louisville
Status:	Closed	***Zip:***	80027
Release Date:	5/12/1992	***State:***	CO
Closure Date:	1/19/1995	***County:***	Boulder
NFA Type:	Pre-RBCA	***Latitude:***	39.962239
Release Cause:		***Longitude:***	-105.178105
Reimbursement Total:		***Latitude Longitude:***	39.962239, -105.178105
Contact:	Edgar Ethington		
Release Source:			
Site Name:	CDOT Superior		
Address:	7979 Marshall Rd		
Email:	cdle_ops_public_record_center@state.co.us		
Link :	https://socgov18.force.com/s/release/a183h000003KW5u		

10	***2 of 2***	***WNW***	***0.38 / 2,021.23***	***5,506.55 / 40***	***CDOT Superior 7979 Marshall Rd Louisville CO 80027***	***LUST TRUST***

Facility ID:	7679	***Event ID:***	518
TtlAmtAppvdForReim :	19993.57	***Release Date:***	5/12/1992
County:	Boulder		

11	***1 of 1***	***N***	***0.48 / 2,510.63***	***5,473.72 / 7***	***My Goods Market #6526 520 S McCaslin Blvd Louisville 80027 CO***	***LST***

Facility ID:	6701	***Fac Name(CDLE):***	My Goods Market #6526
Event ID:		***Address(CDLE):***	520 S McCaslin Blvd

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Facility Name(OPS):	My Goods Market #6526	**Fac Type(CDLE):**	Retail
Facility Type(OPS):	Retail	**Fac Category(CDLE):**	Retail Gas Station
Fac Category(OPS):	Retail Gas Station	**City(CDLE):**	Louisville
Address(OPS):	520 S McCaslin Blvd	**Zip(CDLE):**	80027
City(OPS):	Louisville	**County(CDLE):**	Boulder
Zip Code(OPS):	80027	**State(CDLE):**	
County(OPS):	Boulder	**Latitude(CDLE):**	39.962837
State(OPS):	CO	**Longitude(CDLE):**	-105.163052
Lat Long(OPS):	39.962837, -105.163052		

Fac Name(COSTIS): My Goods Market #6526
Address (COSTIS): 520 S McCaslin Blvd
Louisville 80027
County (COSTIS): Boulder
Original Source: Colorado Storage Tank Information System (COSTIS) (As of October, 2021); Colorado Department of Labor and Employment (CDLE); Oil & Public Safety(OPS) Regulated Storage Tanks

Owner ID: 22690
Owner Name:

Events (CDLE)

Event ID:		**Proj. Closure Date:**	
Alt Event ID:		**Category:**	
Status:	Closed	**Sardonyx ID:**	
UST Tank Count:	2	**MTBE Classifica:**	
AST Tank Count:	0	**Sum of Reimbur Amt:**	
Source of Release:		**Reviewer Full Name:**	
Cause of Release:		**Logged On:**	10/18/2016
Confirm Rel Dt:	10/14/2016	**Logged By:**	

Site Name: My Goods Market #6526
Loc Addr:
Loc Addr2:
Loc Addr3:
Aka Name:
Aka Loc Addr:

Facility (CDLE)

Owner Costis ID:	OWNR-22690	**Type:**	Retail
No of Active Tanks:	2	**Facility Owner:**	Apro LLC DBA United Pacific
No of Metred Prod:	36		

OPS Regulated Storage Tanks

No of Tanks: 2

12	*1 of 1*	*N*	*0.77 / 4,074.24*	*5,472.53 / 6*	***CONTINENTAL CLEANERS 305 MCCASLIN BLVD LOUISVILLE CO 80027***	*RCRA CORRACTS*

EPA Handler ID: COR000012211
Gen Status Universe: No Report
Contact Name: RANDY G ELLIS
Contact Address: 305 , MCCASLIN BLVD , , LOUISVILLE , CO, 80027 , US
Contact Phone No and Ext: 303-926-9120
Contact Email:
Contact Country: US
County Name: BOULDER
EPA Region: 08
Land Type: Private
Receive Date: 20160216
Location Latitude:
Location Longitude:

Event/Area Details

Area Name:	ENTIRE FACILITY
Event Code:	CA150
Corrective Action Event Descri:	INVESTIGATION WORKPLAN APPROVED
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA200
Corrective Action Event Descri:	INVESTIGATION COMPLETE
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA400
Corrective Action Event Descri:	REMEDY DECISION
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA550NR
Corrective Action Event Descri:	REMEDY CONSTRUCTION-NO REMEDY CONSTRUCTED
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA900NC
Corrective Action Event Descri:	CA PERFORMANCE STANDARDS ATTAINED - NO CONTROLS NECESSARY
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA999NF

Corrective Action Event Descri:	CA PROCESS IS TERMINATED-NO FURTHER ACTION
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA060
Corrective Action Event Descri:	NOTICE OF CONTAMINATION
Actual Date of Event:	20181016
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181016
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA100
Corrective Action Event Descri:	INVESTIGATION IMPOSITION
Actual Date of Event:	20181016
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181016
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Violation/Evaluation Summary

Note: NO VIOLATIONS: All of the compliance records associated with this facility (EPA ID) indicate NO VIOLATIONS; Compliance Monitoring and Enforcement table dated Jul, 2023.

Evaluation Details

Evaluation Start Date:	20181203
Evaluation Type Description:	FOCUSED COMPLIANCE INSPECTION
Violation Short Description:	
Return to Compliance Date:	
Evaluation Agency:	State

Evaluation Start Date:	20150209
Evaluation Type Description:	FACILITY SELF DISCLOSURE
Violation Short Description:	
Return to Compliance Date:	
Evaluation Agency:	State

Evaluation Start Date:	20140228
Evaluation Type Description:	FACILITY SELF DISCLOSURE
Violation Short Description:	
Return to Compliance Date:	
Evaluation Agency:	State

Evaluation Start Date:	20130209
Evaluation Type Description:	FACILITY SELF DISCLOSURE
Violation Short Description:	
Return to Compliance Date:	
Evaluation Agency:	State

Evaluation Start Date: 20120229
Evaluation Type Description: FACILITY SELF DISCLOSURE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20111021
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20110218
Evaluation Type Description: FACILITY SELF DISCLOSURE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20100201
Evaluation Type Description: FACILITY SELF DISCLOSURE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20091204
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20090428
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20080116
Evaluation Type Description: FACILITY SELF DISCLOSURE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20060301
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner: No
Smelting, Melting and Refining: No
Underground Injection Control: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19981215
Handler Name: CONTINENTAL CLEANERS
Federal Waste Generator Code: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D039
Waste Code Description: TETRACHLOROETHYLENE

Hazardous Waste Code: F002
Waste Code Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Sequence No: 2
Receive Date: 20090109
Handler Name: CONTINENTAL CLEANERS
Federal Waste Generator Code: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D039
Waste Code Description: TETRACHLOROETHYLENE

Hazardous Waste Code: F002
Waste Code Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Sequence No: 3
Receive Date: 20160216
Handler Name: CONTINENTAL CLEANERS
Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D039
Waste Code Description: TETRACHLOROETHYLENE

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street 1:***	305 MCCASLIN BLVD
Name:	RANDY ELLIS	***Street 2:***	
Date Became Current:		***City:***	LOUISVILLE
Date Ended Current:		***State:***	CO
Phone:	303-926-9120	***Country:***	
Source Type:	Notification	***Zip Code:***	80027

Owner/Operator Ind:	Current Operator	***Street No:***	305
Type:	Private	***Street 1:***	MCCASLIN BLVD
Name:	CONTINENTAL CLEANERS	***Street 2:***	
Date Became Current:	20090109	***City:***	LOUISVILLE
Date Ended Current:		***State:***	CO
Phone:	303-926-9120	***Country:***	US
Source Type:	Notification	***Zip Code:***	80027

Owner/Operator Ind:	Current Owner	***Street No:***	305
Type:	Private	***Street 1:***	MCCASLIN BLVD
Name:	RANDY ELLIS	***Street 2:***	
Date Became Current:	20090109	***City:***	LOUISVILLE
Date Ended Current:		***State:***	CO
Phone:	303-926-9120	***Country:***	US
Source Type:	Notification	***Zip Code:***	80027

Historical Handler Details

Receive Dt:	20090109
Generator Code Description:	Very Small Quantity Generator
Handler Name:	CONTINENTAL CLEANERS

Receive Dt:	19981215
Generator Code Description:	Very Small Quantity Generator
Handler Name:	CONTINENTAL CLEANERS

Unplottable Summary

Total: 0 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID

No unplottable records were found that may be relevant for the search criteria.

Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

Sites on the United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: May 25, 2023

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the United States Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: May 25, 2023

Deleted NPL: DELETED NPL

Sites deleted from the United States Environmental Protection Agency (EPA)'s National Priorities List. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: May 25, 2023

SEMS List 8R Active Site Inventory: SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the SEMS GIS/REST file layer obtained from EPA's Facility Registry Service.

Government Publication Date: Jul 26, 2023

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file.

Government Publication Date: Jul 26, 2023

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Jul 10, 2023

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by RCRA.

Government Publication Date: Jul 10, 2023

RCRA Generator List: RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Jul 10, 2023

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Jul 10, 2023

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Jul 10, 2023

RCRA Non-Generators: RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Jul 10, 2023

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Jul 10, 2023

Federal Engineering Controls-ECs: FED ENG

This list of Engineering controls (ECs) is provided by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents issued in fiscal years 1982-2021 for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Aug 23, 2023

Federal Institutional Controls- ICs: FED INST

This list of Institutional controls (ICs) is provided by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents issued in fiscal years 1982-2021 for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Aug 23, 2023

Land Use Control Information System: LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Institutional Control Boundaries at NPL sites: NPL IC

Boundaries of Institutional Control areas at sites on the United States Environmental Protection Agency (EPA)'s National Priorities List, or Proposed or Deleted, made available by the EPA's Shared Enterprise Geodata and Services (SEGS). United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.

Government Publication Date: May 25, 2023

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Apr 3, 2023

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Sep 13, 2022

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. This listing includes FRP facilities from an applicable EPA FOIA file and Homeland Infrastructure Foundation-Level Data (HIFLD) data file.

Government Publication Date: May 2, 2023

Delisted Facility Response Plans: DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: May 2, 2023

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Mar 9, 2023

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Jun 29, 2022

LIEN on Property: SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Jul 26, 2023

Superfund Decision Documents: SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: May 25, 2023

Formerly Utilized Sites Remedial Action Program: DOE FUSRAP

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

State

Methane Gas Study Sites: LANDFILL METHANE

This Investigation of Methane Gas Hazards report was prepared by the Denver Office of Emergency Preparedness in 1981. The purpose of this study was to assess the actual and potential generation, migration, explosive and related problems associated with specified landfills, and to identify existing and potential problems, suggested strategies to prevent, abate, and control such problems and recommend investigative and monitoring functions as may be deemed necessary. The Colorado Department of Health selected eight landfills as priorities due to population density and potential hazards to population and property.

Government Publication Date: Jan 2, 1981

Environmental Covenants and Use Restrictions: COVENANTS

Boundaries of environmental covenant/environmental use restriction sites made available by the Colorado Deparment of Public Health & Environment (CDPHE). CPDHE has the authority to approve requests to restrict the future use of a property using an enforceable agreement called an environmental covenant. Land use restrictions may be used to ensure the cleanup remedy adequately protects human health and the environment when a contaminated site isn't cleaned up completely.

Government Publication Date: Apr 20, 2023

Superfund National Priorities List and Natural Resource Damages sites: SUPERFUND NRD

Boundaries of Superfund National Priorities List sites and Natural Resource Damages sites in Colorado made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Apr 14, 2023

Superfund Sites: SHWS

A list of Superfund sites in Colorado made available by the Colorado Department of Public Health and Environment (CDPHE). In Colorado, the cleanup of Superfund sites is overseen by the CDPHE or the Environmental Protection Agency (EPA). This list includes active Superfund sites, deleted sites, proposed sites, and natural resource damage sites.

Government Publication Date: Jun 29, 2022

Delisted Superfund Sites: DELISTED SHWS

Sites which once appeared on - but have since been removed from - the list of Superfund sites in Colorado made available by the Colorado Department of Public Health and Environment (CDPHE). In Colorado, the cleanup of Superfund sites is overseen by the CDPHE or the Environmental Protection Agency (EPA).

Government Publication Date: Jun 29, 2022

Solid Waste Facilities and Landfills: SWF/LF

The Colorado Department of Public Health and Environment (CDPHE) regulates the management and disposal of solid waste, landfill facilities, waste tire registrants, and waste tire haulers. Solid waste and landfills data is provided by the CDPHE's Hazardous Materials and Waste Management Division's Solid Waste Report and the Environmental Sites Search Map Application. Waste tire data is made available by the CDPHE.

Government Publication Date: May 4, 2023

Historical Solid Waste (Closed or Abandoned Landfills): HIST LF

In the early 1980s the Hazardous Materials Waste Management Division of the Colorado Department of Public Health and Environment (CDPHE) conducted a survey of staff members and local agencies. The information gathered was compiled in 1984 for sites that were known or thought to have waste issues. The information is not complete and generally not very definitive or verifiable. This data became the Solid Waste Historical Data. The data is not maintained and has not been since the late 1980s.

Government Publication Date: 1984

Tri-County Historic Landfills: HIST LANDFILLS

A list of historical landfills made available by the Tri-County Health Department (TCHD). The TCHD serves Adams, Arapahoe, and Douglas Counties.

Government Publication Date: Jun 1, 2022

Registered Recycling Facilities: RECYCLING

This list of registered recycling facilities in Colorado is maintained by the Colorado Department of Public Health & Environment (CDPHE). This list includes primarily processing facilities for recyclable materials, such as material recovery facilities, industrial recycling operations, and recyclable material end user sites. Collection centers/drop-off locations are not included unless the site is also processing recyclable materials (separating, sorting, dismantling, grinding, baling, etc.).

Government Publication Date: Mar 13, 2023

Leaking Storage Tanks: LST

A list of leaking storage tank locations from the Colorado Storage Tank Information System (COSTIS) database, including those which have applied for reimbursement from the Petroleum Storage Tank Fund. This list is made available by the Division of Oil and Public Safety (OPS) of the Colorado Department of Labor and Employment (CDLE) and includes data compiled from applicable FOIA files, COSTIS files and other OPS datasets. Classified military tanks are excluded from this data.

Government Publication Date: Jun 1, 2023

LUST Trust Sites: LUST TRUST

The Division of Oil and Public Safety of the Colorado Department of Labor and Employment (CDLE) manages a Petroleum Storage Tank Fund (The Fund) that receives and processes applications to the Fund for reimbursement of costs related to assessment and cleanup of petroleum contaminated sites. Classified military tanks are excluded from this data.

Government Publication Date: Jun 1, 2023

Delisted Leaking Storage Tanks: DELISTED LST

This database contains a list of leaking storage tank sites and their Funds for reimbursement of costs related to assessment and cleanup that were removed from the Colorado Department of Labor and Employment (CDLE) database.

Government Publication Date: Jun 1, 2023

Underground Storage Tanks: UST

A list of underground storage tanks from the Colorado Storage Tank Information System (COSTIS) database. This database is made available by the Division of Oil and Public Safety (OPS) of the Colorado Department of Labor and Employment (CDLE). Data is compiled from applicable FOIA files, COSTIS files and other OPS datasets. Classified military tanks are excluded from this data.

Government Publication Date: Jun 1, 2023

Aboveground Storage Tanks: AST

A list of aboveground storage tanks from the Colorado Storage Tank Information System (COSTIS) database. This list is made available by the Division of Oil and Public Safety (OPS) of the Colorado Department of Labor and Employment (CDLE). Data is compiled from applicable FOIA files, COSTIS files and other OPS datasets. Classified military tanks are excluded from this data.

Government Publication Date: Jun 1, 2023

Storage Tank Information System (COSTIS): TANKS

This storage tank listing is provided by the Colorado Department of Labor and Employment, Division of Oil and Public Safety (OPS). The OPS manages the Colorado Storage Tank Information System (COSTIS) database which stores information on these facilities. This tank data includes facilities with liquefied petroleum gas, liquefied natural gas, and compressed natural gas tanks which are not classified as either underground storage tanks or aboveground storage tanks. Data is compiled from applicable FOIA files, COSTIS files and other OPS datasets. Classified military tanks are excluded from this data.

Government Publication Date: Jun 1, 2023

Delisted Storage Tanks: DTNK

This database contains a list of closed storage tank sites that were removed from the Division of Oil and Public Safety of the Colorado Department of Labor and Employment (CDLE) Tank Information System.

Government Publication Date: Jun 1, 2023

Environmental Covenants and Environmental Use Restrictions List: AUL

The Colorado Department of Public Health and Environment (CDPHE) maintains a list of sites that have environmental covenants and use restrictions in place. Land use restrictions may be used to ensure the cleanup remedy adequately protects human health and the environment when a contaminated site is not cleaned up completely.

Government Publication Date: Apr 20, 2023

Voluntary Cleanup and Redevelopment Program Sites: VCP

The Voluntary Cleanup and Redevelopment Program (VCUP) of the Colorado Department of Public Health and Environment (CDPHE) was created in 1994 with the objective to facilitate the redevelopment and transfer of contaminated properties. This VCUP site listing includes applicable active and inactive sites from the CDPHE Voluntary Cleanup Open Records data file and map layer.

Government Publication Date: Aug 2, 2023

Brownfield Sites: BROWNFIELDS

A list of Brownfields Program sites from the Hazardous Materials and Waste Management Division and the Colorado Environmental Records Search Interactive Map made available by the Colorado Department of Public Health and Environment (CDPHE). Sites which go untouched because of their real or perceived contamination can be rehabilitated using the CDPHE Brownfields Program.

Government Publication Date: Apr 3, 2023

Tribal

Leaking Underground Storage Tanks on Tribal/Indian Lands: INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 8, which includes Colorado, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 20, 2023

Underground Storage Tanks on Tribal/Indian Lands: INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 8, which includes Colorado, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 20, 2023

Delisted Tribal Leaking Storage Tanks: DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 26, 2023

Delisted Tribal Underground Storage Tanks: DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 26, 2023

County

No County databases were selected to be included in the search.

Additional Environmental Record Sources

Federal

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Mar 2, 2023

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Oct 19, 2022

PFOA/PFOS Contaminated Sites: PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Sep 14, 2023

Federal Agency Locations with Known or Suspected PFAS Detections: PFAS FED SITES

List of Federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS), made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data. EPA outlines that these data are gathered from several federal entities, such as the Federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration, Department of Transportation, and Department of Energy. The dates this data was extracted for the PFAS Analytic Tools range from March 2022 to April 2023. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: Apr 24, 2023

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents, and this is cited in the tracker. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map, credited to the Northeastern University's PFAS Project Lab, Silent Spring Institute, and the PFAS-REACH team. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: https://pfasproject.com/pfas-sites-and-community-resources/

Government Publication Date: Oct 9, 2022

National Response Center PFAS Spills: ERNS PFAS

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the "Material Involved" or "Incident Description" fields. Limitations: The data from the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Apr 15, 2023

PFAS NPDES Discharge Monitoring: PFAS NPDES

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: May 1, 2023

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Oct 19, 2022

Perfluorinated Alkyl Substances (PFAS) Water Quality: PFAS WATER

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated Master List of PFAS Substances.

Government Publication Date: Jul 20, 2020

PFAS TSCA Manufacture and Import Facilities: PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest : PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Apr 9, 2023

PFAS Industry Sectors: PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The EPA developed the dataset from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile, but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Apr 16, 2023

Hazardous Materials Information Reporting System: HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Sep 1, 2020

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Jul 26, 2023

Toxic Substances Control Act: TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Apr 11, 2019

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

Government Publication Date: Aug 23, 2023

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Government Publication Date: Jan 21, 2023

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. The EPA tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Apr 15, 2023

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: Apr 15, 2023

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset.

Government Publication Date: Jul 12, 2022

FUDS Munitions Response Sites: FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: Jul 12, 2022

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

A list of flagged pipeline incidents made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types.

Government Publication Date: Dec 30, 2022

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: May 1, 2023

Surface Mining Control and Reclamation Act Sites: SMCRA

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) impacts, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into eAMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: Jun 13, 2023

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: May 25, 2023

Alternative Fueling Stations: ALT FUELS

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Aug 30, 2023

Superfunds Consent Decrees: CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS) since 2010. CMS may not reflect the latest developments in a case nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Apr 19, 2023

Air Facility System: AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Mar 1, 2023

Polychlorinated Biphenyl (PCB) Transformers: PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Mar 20, 2023

State

Spills: SPILLS

A list of hazardous material spills and releases (including Meth Labs) that were reported to the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Apr 8, 2022

Colorado Oil and Gas Conservation Commission Spills: OG SPILLS

A list of spills made available by the Colorado Oil and Gas Conservation Commission (COGCC).

Government Publication Date: Aug 8, 2023

Dry Cleaning Facilities: DRYCLEANERS

A list of dry cleaners provided by the Colorado Department of Public Health and Environment (CDPHE) Hazardous Waste Compliance Assurance Unit and Stationary Sources Program.

Government Publication Date: Aug 3, 2023

Delisted Dry Cleaning Facilities: DELISTED DRYCLEANERS

List of sites removed from the drycleaners database made available by the Department of Public Health & Environment.

Government Publication Date: Aug 3, 2023

Air Pollution Control Division Permitted Facilities: AIR PERMITS

This list of Air Pollution Control Division Permitted Facilities is maintained by the Colorado Department of Public Health and Environment. The Stationary Sources Program evaluates and develops air permits for stationary sources in Colorado. The program inspects sources to determine compliance with air regulations and permit conditions and maintains an inventory of air pollution emissions throughout the state.

Government Publication Date: Feb 13, 2023

Per- and Polyfluoroalkyl Substances (PFAS): PFAS

A list of facilities that reported storing or using AFFF or Class B firefighting foam, other PFAS chemicals, have reported PFAS passthrough, or have detectable limits of PFAS in their discharge.

Government Publication Date: Dec 8, 2020

Asbestos Abatement and Demolition Projects: ASBESTOS

A list of Asbestos Abatement and Demolition Projects made available by the Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division.

Government Publication Date: Dec 28, 2017

Hazardous Waste Sites- Generator: HAZ GEN

A list of hazardous waste generators.This list is made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Jun 30, 2003

Permitted Facilities Listing: PDES

A list of permitted facilities tracked by the Water Quality Control Division of the Department of Public Health & Environment (DPHE). This list is the state version of the NPDES (National Pollution Discharge Elimination System).

Government Publication Date: May 1, 2023

Hazardous Waste Sites- Treatment, Storage & Disposal: HAZ TSD

A list of facilities that treat, store, dispose, or recycle hazardous waste on-site. This list is made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Jun 30, 2003

Hazardous Waste Sites- Corrective Action: HAZ CORRACT

A list of hazardous waste generators with corrective actions. This list is made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Jun 30, 2003

Uranium Mill Tailings Sites: UMTRA

This list of former uranium mill sites in Colorado, with cleanup authorized by the Uranium Mill Tailings Remedial Action (UMTRA) program, was provided by the Colorado Department of Public Health and Environment. Because much of the cleanup is complete, the focus has shifted to primarily "Post-UMTRA issues," or the discovery of new uranium mill tailings material by private citizens, utility companies or local governments.

Government Publication Date: Sep 26, 2022

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental databases were selected to be included in the search.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX E
RECORDS OF COMMUNICATIONS

COLORADO
Hazardous Materials & Waste Management Division
Department of Public Health & Environment

*Each environmental division maintains separate records. This form is **only** for radiation, remediation, solid waste and hazardous waste records review requests. You must contact the Air Pollution Control Division and the Water Quality Control Division individually to review their records.

Requestor Name * Nancy Otterstrom

Company Name Kumar & Associates **Address** * 2390 North Lipan Street

City * Denver **State** * CO **Zip** * 80223

Telephone Number * 7203189453

Email * notterstrom@kumarusa.com **Date (mm/dd/yyyy)** * 10/16/2023

Site 1 Name * Vacant lot **Site 2 Name** Element By Westin

Address * 3 South Marshall Road **Address** 3 South Marshall Road

City/State/Zip * Superior, CO **City/State/Zip** Superior, CO

Notes * Any haz mat records please

Notes Any haz mat records please

Site 3 Name WB Hwy 36 Just East of McCaslin Blvd. **Site 4 Name**

Address WB Hwy 36 Just East of McCaslin Blvd. **Address**

City/State/Zip Superior, CO **City/State/Zip**

Notes SPILL records please

Notes

Per Colorado law 24-72 and Department policy
The Department shall charge $.25 per page for all documents copied when the number of pages produced exceeds 25.

If researching, retrieving, and producing records requires more than one hour of staff time, the department shall charge $30 per hour for all staff time associated with locating and producing records for a requester. The department may charge the actual per-box retrieval fees for retrieving responsive records that are stored offsite by a vendor.

Large document requests may be sent to the state’s contracted vendor, who will provide a cost estimate to the requester.

From: robb.farquhar@state.co.us on behalf of cdphe_cora_hmwmd - CDPHE, CDPHE
To: Nancy Otterstrom
Subject: Re: Records review Request Nancy Otterstrom notterstrom@kumarusa.com
Date: Tuesday, October 17, 2023 7:18:35 AM

Nancy,

Our system only recognizes addresses, if you can supply a valid address for the 2nd request that would be helpful.
3 South Marshall Rd, Superior, CO - No records found
WB Hwy 36 Just East of McCaslin Blvd. Superior, CO - No records found

Robb

On Mon, Oct 16, 2023 at 1:31 PM Formsite <noreply@fs20.formsite.com> wrote:

> A new request has been submitted. Please copy the respondent's email from the subject line.
>
> View this result: #20770579
>
> This email was sent to cdphe_cora_hmwmd@state.co.us as a result of a form being completed.
> Click here to report unwanted email.



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You can search records via the OnBase Public Access Viewer. See User Guides for tips on searching here: HMWMD User Guides

Or, use our interactive map

Visit the HMWMD Records page for additional information on HMWMD programs and records procedures.

APPENDIX F
QUALIFICATIONS OF THE ENVIRONMENTAL PROFESSIONAL

Nancy Otterstrom

Environmental Services Manager

Education

B.S. Biology with Environmental Science Focus, Chemistry Minor, Roosevelt University, 2003

Professional Certifications:

- EPA/AHERA and Colorado - Asbestos Air Monitoring Specialist #18031 (AQCC, Regulation 8)
- EPA/AHERA and Colorado - Asbestos Building Inspector #18031
- NIOSH 582-E – Sampling and Evaluating Airborne Asbestos Dust
- Certified X-Ray Fluorescence Lead-analyzer (XRF)
- Certified Lead Inspector #17668
- OSHA 40-hour HAZWOPR
- CPR Trained
- Colorado Class A/B Storage Tank Operator

Qualifications Summary

Ms. Otterstrom has over **15 years' total experience** working on various environmental projects on residential, commercial, municipal, and government projects. She has acquired diverse knowledge working with clients ranging from individual home owners to private contractors to regulatory agencies, in dealing with varying types of environmental contaminations and cleanup procedures. She has also acquired managerial and directorial experience in multiple, deadline-oriented office environments.

Professional Experience

- **Phase I Environmental Site Assessments (ESAs):** Performed more than 100 Phase I ESAs for developers, financial institutions, governmental agencies, municipalities, various commercial clients, and individuals. These assessments included proposal writing, client interaction, data collection and management, report production, and regulatory review and follow-up communication. Various clients included the FDIC, JC Penney, Starbucks, KeyBank, Wal-Mart, Century Communities, KB Home Colorado, and CVS Pharmacy.

- **Phase II ESAs/Limited Site Investigations:** Performed numerous Phase II ESAs/Limited Site Investigations as a result of findings of the Phase I ESAs. These projects included subsurface investigations of the potentially impacted sites for soil, groundwater, and vapor. Typical project scopes included subcontractor management, field screening of soils, installation of soil borings, groundwater monitoring wells, and vapor points, sample collection, data management, report production, and regulatory communication. Often, these projects would lead to underground storage tank removals and advanced remedial actions.

- **Soil Vapor:** Performed soil-vapor probe installation and monitoring for the City and County of Broomfield, KB Home of Colorado, and various residential and commercial clients. Duties include hand-auguring vapor probes to five feet below ground surface, installation of probes, completion of mount, and monitoring with landfill gas meters for the presence of methane and various landfill gases.

- **Asbestos Building Inspector** for various commercial clients, such as JC Penney, restoration companies, and financial institutions. Projects included sample collection, data management, report production, and client follow-up during pre-abatement preparation. In addition to the inspection process, daily tasks included public and traffic control, maintenance staff education, and serving as liaison for the client with the appropriate regulatory agencies.

- **Lead Inspector** for Denver Public Schools, restoration companies, and various individuals. As with asbestos inspections, lead inspections included collection of samples (utilizing an X-ray Fluorescence machine), data management, report writing, and regulatory/client reporting.

- **Air monitoring specialist** at the CU Boulder Campus, various residential projects, and commercial buildings. Project details included daily air monitoring, visual inspections, employee safety checks, and final air clearance sampling.

- **Certified Class A/B Storage Tank Operator:** Performed monthly and yearly underground storage tank inspections for various clients in the Denver Metro area, such as Standard Fence Company and US Transport. Inspections included reviewing regulatory paperwork and testing, Automatic Tank Gauge assessment, visual inspection and documentation of findings.

Grant Miller

Environmental Scientist/Geologist

Education

B.S Geology, Colorado State University, Fort Collins, 2013

A.A.S. Mechanical AutoCAD/Drafting, Pikes Peak Community College, Colorado Springs, 2010

Professional Certifications:

- OSHA 40-hour HAZWOPER

Qualifications Summary

Mr. Miller has **9 years of experience** in environmental and geotechnical subsurface exploration drilling industry. He is experienced in performing Phase I and II Environmental Site Assessments, subsurface investigations, soils classification, and remediation oversight.

Mr. Miller also has extensive experience in managing field operations, conducting water quality investigations, groundwater and soil investigations and remediation, sample collection, and data evaluation. Mr. Miller is an experienced AutoCAD/GIS technician who has provided support for projects such as surface and groundwater modeling, landfill surveys, and various field mapping projects.

Professional Experience

- **Phase I Environmental Site Assessments –** performed numerous assessments involving undeveloped, commercial, and industrial properties throughout the United States. Project experience includes convenience stations, automotive service stations, commercial shopping malls, cellphone tower sites, wood treating facilities, and manufacturing facilities. His tasks included records research, site reconnaissance, and report preparation.

- **Phase II Environmental Site Assessments –** experienced in proposing, planning, implementing, and reporting for Phase II Environmental Site Assessments throughout the United States. Projects included subcontractor management, subsurface investigations, installation of soil borings, groundwater monitoring wells, and soil vapor points.

- **Environmental Investigations –** responsibilities include, but are not limited to, site characterizations, Corrective Action Plan implementation such as the installation, operation, and maintenance of various types of soil and groundwater remediation systems; collection of soil and groundwater samples, well gauging, pilot testing, soil studies, performance of aqueous and non-aqueous phase liquids recovery and in-situ remedial injection programs. Additionally, he has performed oversight of UST removals and soil excavation throughout Colorado.

- **QA/QC Oversight –** provided quality assurance and quality control and oversight for the construction of a hazardous waste landfill in Beatty, Nevada. Duties included the construction quality assurance plan preparation, geosynthetic installation QA/QC oversight, conducting landfill surveys using AutoCAD for the closure of landfill cells.

Economic Impact Summary – Everhome Suites Hotel (Lot 3B, Block 1 of Superior Town Center)

Economic Impact of Hotel

The Town of Superior stands to benefit significantly from the establishment of a hotel in Downtown Superior. The direct impacts include the projected revenues generated by hotel guests and the payroll paid out to hotel employees and temporary construction workers. Fiscal impacts encompass all federal, state, and local taxes collected from the hotel's development and operations. Indirect impacts involve the jobs and income generated by businesses that supply goods and services to the hotel. Induced impacts refer to the economic effects created when hotel employees and suppliers spend their wages on local consumer purchases. Collectively, these factors illustrate the substantial positive economic impact a hotel would bring to the community.

Hotel Synergies with Mixed-Use Downtown

A hotel serves as a crucial economic component to the envisioned mix of uses in Downtown Superior. Following the loss of the Element Hotel in the Marshall Fire, there has been a significant unmet demand for overnight stays. Everhome Suites is poised to meet this demand, especially considering the volume of tournaments and increased entertainment events at the Blue Sport Stable complex. Additionally, Bigsby's Folly and the Coal Creek Innovation Campus will likely drive overnight stays with their patrons, workforce and business development activities. The presence of a hotel will stimulate the local economy by encouraging downtown visitors to patronize the area's retail shops and restaurants.

Proposed Site is a Strategic Location for a Hotel

The proposed site for the hotel has several strategic advantages, including excellent highway visibility, which will provide significant exposure for Everhome Suites and will draw attention to Downtown Superior. The site's walkability to the Blue Sport Stable will potentially alleviate parking and traffic concerns, as tournament or event attendees can easily walk from the hotel. Furthermore, the hotel's location within Downtown Superior enables visitors to support local businesses by increasing foot traffic to nearby retail shops and restaurants. These factors make the identified site an ideal location for a hotel, aligning with the broader vision for Downtown Superior and contributing to the area's economic growth.

3 Marshall Road – Everhome Suites
FDP-2024-03
Superior, CO
Planning Commission – 6:00PM
July 2, 2024

EVERHOME SUITES

EXTENDED STAY BY CHOICE HOTELS



Our Agenda

- Introductions
- Everhome Suites Overview
- Proposed Site and Existing Surrounding Uses
- Questions?

EVERHOME SUITES™
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Who We Are

- **Choice Hotels**
  - 80 Years of Industry Experience
- **Everhome Suites**
  - Newest Brand to Choice Hotel’s Portfolio
- **Extended Stay Market Segment**
  - Consistent Local Economy Support
- **Franchise Model**
  - Operations and Training Support
  - New Construction

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What We Offer

- **Apartment-Style Accommodations:**
  - Spacious studio and one-bedroom layouts with distinct areas for work and leisure.
  - Customizable spaces

- **Pet-Friendly:**
  - Accommodations include options for guests traveling with pets.

- **Fully Equipped Kitchens:**
  - Full-sized refrigerators, dishwashers, stovetops, microwaves, and complete sets of flatware and cookware.

- **Sophisticated Public Spaces:**
  - Multipurpose lobby areas and well-equipped fitness centers.
  - Guest laundry facilities and 24/7 self-service marketplaces offering a range of breakfast items.

- **Recreational Amenities:**
  - Outdoor games, grills, and seating areas.

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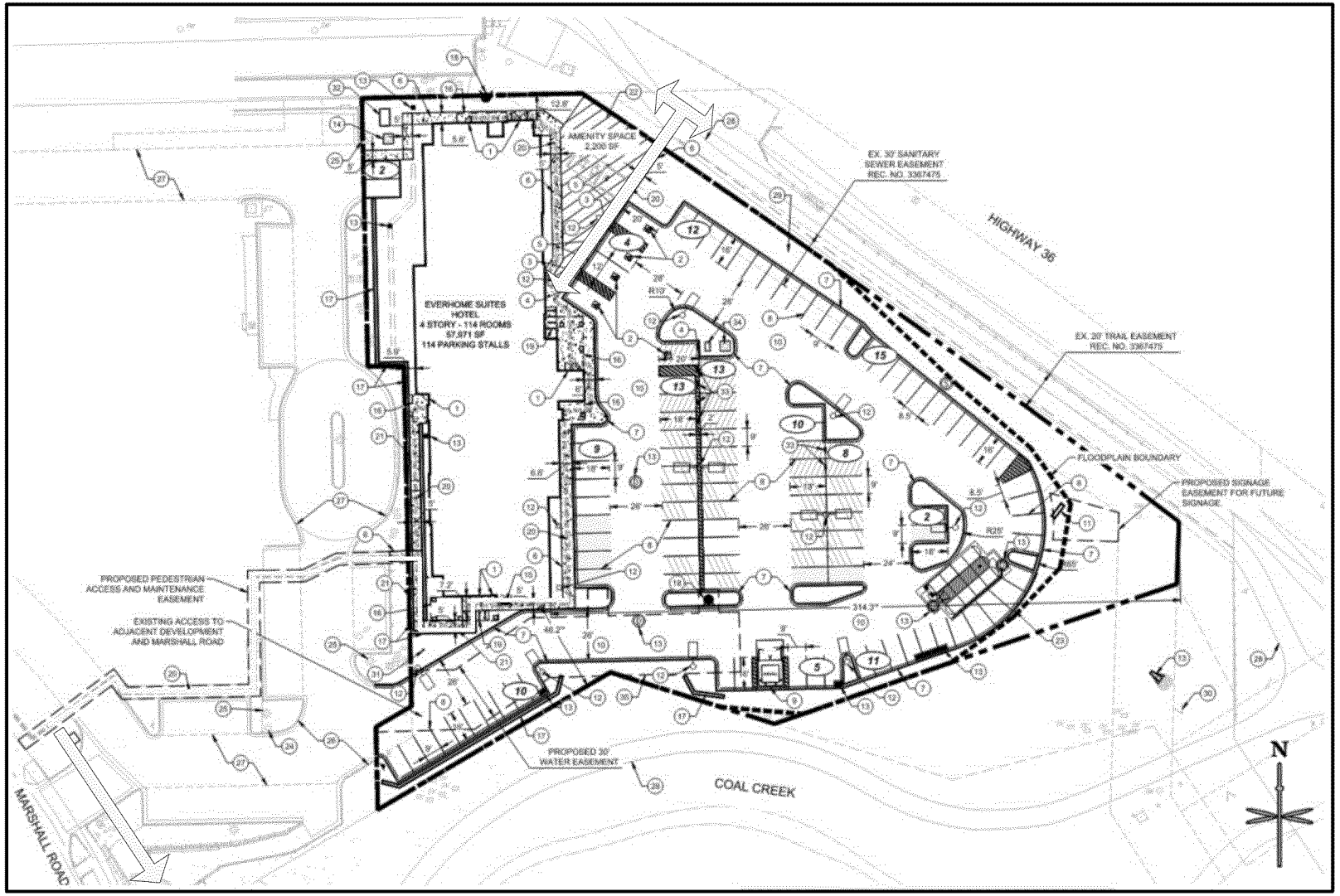
Proposed Site Plan



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Existing vs. Proposed Site





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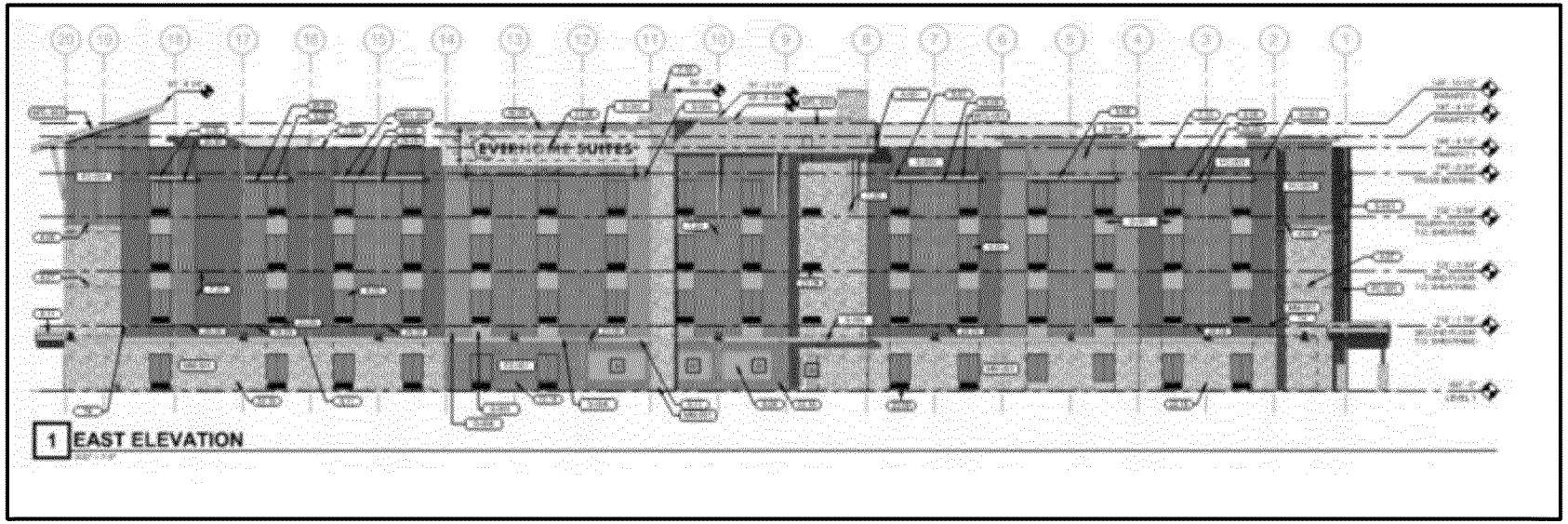
Proposed Rendering





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Additional Renderings





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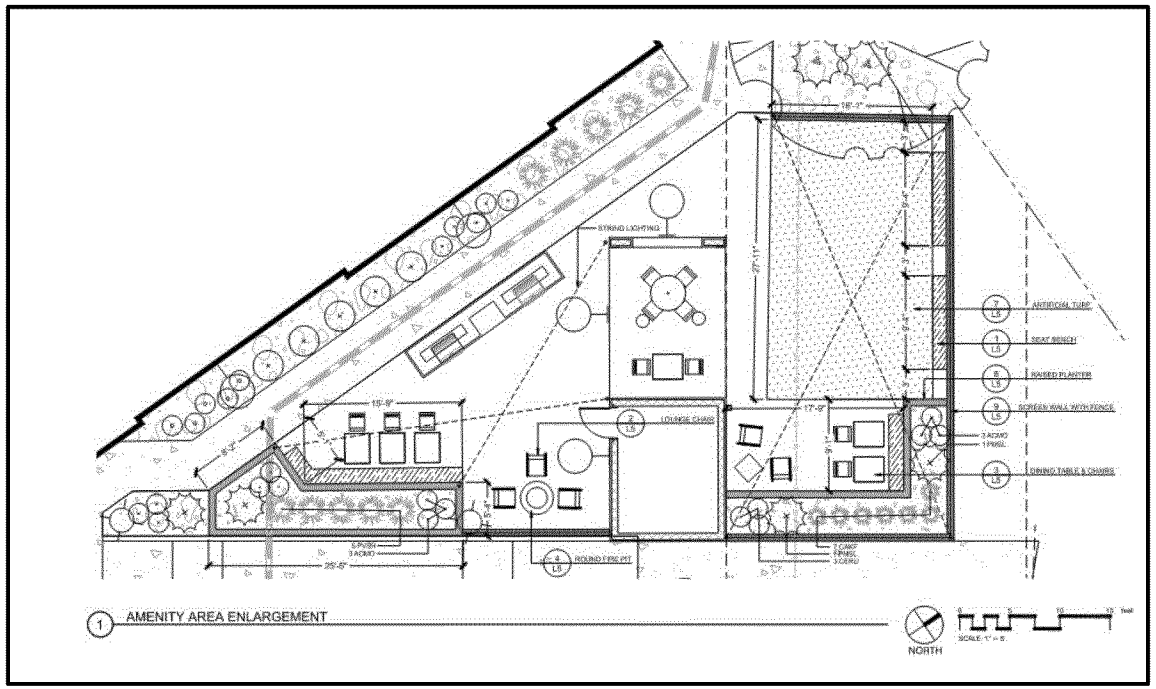
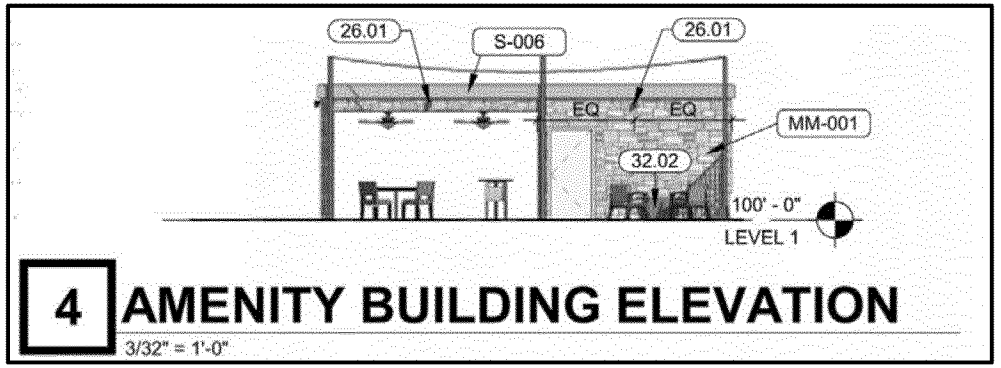
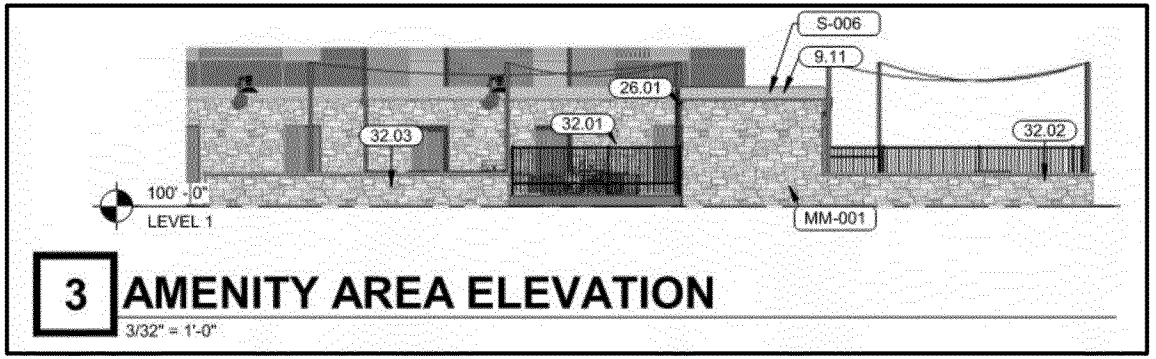
Proposed Amenity Area







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Existing Development



100 Superior Plaza Way – Multi-Tenant Commercial



100 McCaslin Blvd – Multi-Tenant Commercial



90 McCaslin Blvd – Brakes Plus



2 Marshall Road – Tesla Service Center

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HOME
IS
WHERE
THE
HEART
IS



Questions?

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Thank You.

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TOWN OF SUPERIOR
PLANNING COMMISSION
RESOLUTION NO. PC-
SERIES 2024

A RESOLUTION OF THE PLANNING COMMISSION OF THE TOWN OF SUPERIOR RECOMMENDING APPROVAL OF A FINAL DEVELOPMENT PLAN FOR LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER, CASE NO. FDP-2024-03

WHEREAS, Entitlement and Engineering Solutions, Inc., on behalf of Everhome Suites (the "Applicant"), wishes to develop certain property within the Town, legally described in **Exhibit A**, attached hereto and incorporated herein by this reference, and generally described as Lot 3B, Block 1 within Superior Town Center (the "Property");

WHEREAS, the Applicant has filed an application for approval of a final development plan (the "FDP") to construct a hotel with a surface parking lot and private amenity area (the "Application");

WHEREAS, Section 16-10-40 of the Superior Municipal Code (the "Code") requires a public hearing and recommendation by the Planning Commission on the FDP;

WHEREAS, the specific approval criteria for the FDP are set forth in Section 16-10-40(b) of the Code; and

WHEREAS, on _____, 2024, the Planning Commission held a properly-noticed public hearing on the Application.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. The Planning Commission hereby finds that FDP satisfies the applicable approval criteria in the Code, and recommends that the Board of Trustees approve the Application in the form submitted by the Applicant, subject to the following condition: Prior to executing and recording final mylars, the Applicant shall make minor technical and redline corrections to plans as identified by the Town staff.

Section 2. This Resolution is hereby adopted by a majority of those Planning Commissioners present to hear the matter according to the following numbers of votes:

_____ "yes" votes

_____ "no" votes

ADOPTED this ___ day of _____, 2024.

_____
David Harper, Chair

ATTEST:

_____
Lydia Yecke, Town Clerk

Exhibit A
Legal Description

LOT 3B, BLOCK 1 SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3, TOWN OF SUPERIOR, COUNTY OF BOULDER, STATE OF COLORADO

Town Board
Meeting Minutes

June 24, 2024
Town Hall, 124 E. Coal Creek Drive
Superior, CO 80027
7:00 p.m.

Call to Order Meeting of Board of Trustees (7:10 p.m.)

Roll Call

Present:	***Mayor Mark Lacis***
	Mayor Pro Tem Neal Shah
	Trustee Jenn Kaaoush
	Trustee Stephanie Miller
	Trustee Jason Serbu
	Trustee Sandie Hammerly
	Trustee Bob McCool
Absent:	***None***
Others Present:	***Town Manager Matt Magley***
	Town Attorney Nick Hartman
	Town Clerk Lydia Yecke

Approval of Agenda

Motion: Mayor Pro Tem Neal Shah moved to approve Agenda, seconded by Trustee Bob McCool. **Vote:** CARRIED. 7 - 0

Board Reports

The following Board members gave Board Reports; Trustee Kaaoush, Trustee Miller, Trustee Serbu, Trustee Hammerly, Trustee McCool, Mayor Pro-Tem Shah, Mayor Lacis and Town Manager Magley.

Public comment on Consent Agenda, Presentations, and Non-Agenda Items.

The following residents gave public comment; George Kupfner and Jon Hart

Advisory Committee Interviews

Boulder County Wildfire Research Presentation

Consent Agenda

Motion: Mayor Pro Tem Neal Shah moved to approve Consent Agenda, seconded by Trustee Sandie Hammerly. **Vote:** CARRIED. 7 - 0

Consideration of Ordinance Adopting Short-Term Rental Regulations – First Reading

This Ordinance is a 1st reading only and will be brought back to the Board for a 2nd reading on August 12, 2024

Mayor Lacis adjourned the meeting at 9:55 p.m.

_____
Mark Lacis, Mayor

_____
Lydia Yecke, Town Clerk

DRAFT